

MINE DEVELOPMENT ASSOCIATES

MINE ENGINEERING SERVICES



# UPDATED RESOURCE ESTIMATE AND NI 43-101 TECHNICAL REPORT, EASTSIDE AND CASTLE GOLD-SILVER PROPERTY, ESMERALDA COUNTY, NEVADA



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# MINE DEVELOPMENT ASSOCIATES

# MINE ENGINEERING SERVICES

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### **APPENDICES**

Appendix A List of Unpatented Federal Lode Mining Claims

### FRONTISPIECE

Landsat aerial view of the Eastside project drilling area, looking north with Google Earth<sup>®</sup>.



# MINE DEVELOPMENT ASSOCIATES

MINE ENGINEERING SERVICES

### **1.0 SUMMARY (ITEM 1)**

Mine Development Associates ("MDA"), a division of RESPEC, has prepared this Technical Report for the Eastside and Castle gold-silver property, located in Esmeralda County, Nevada, at the request of Allegiant Gold Ltd. ("Allegiant"), a British Columbia corporation that was spun off from Columbus (US Property Holding) Corporation ("Columbus"). Allegiant holds its 100% ownership interest in the Eastside and Castle project through its wholly owned subsidiary Allegiant Gold (U.S.) Ltd. and an agreement dated January 12, 2012 with Cordilleran Exploration Company, LLC ("Cordex") of Reno, Nevada. The purpose of this report is to provide a technical summary supporting an updated estimate of gold and silver resources of the Eastside gold-silver deposit, following Allegiant's drilling conducted in 2021 and a first-time estimate for the Castle area following CIM Definition Standards and Canadian National Instrument 43-101.

The Eastside and Castle property is a low-sulfidation, mostly oxidized, epithermal gold-silver system dominantly hosted within Tertiary volcanic rocks: rhyolite in the Eastside area and andesite in the Castle area. The two principal areas with resources are the Eastside area at the north end and about 14km at the south end of the property the Castle area.

### 1.1 Property Description and Ownership

The Eastside and Castle property consists of 973 unpatented lode mining claims covering approximately 8,289 hectares in northern Esmeralda County, Nevada. Allegiant has represented that all of the claims are valid until August 31, 2021. The annual fees total \$172,233 per year for the current 973 claims comprising the property. The surface within the Eastside and Castle property is managed by the U.S. Bureau of Land Management. There is no private surface or Nevada State land within the property.

The 973 claims in the property include: a) 35 Eastside claims leased from McIntosh Exploration LLC, b) 140 ES claims also leased from McIntosh Exploration LLC, and c) 218 ES claims, 215 DP claims, 140 PF claims, three ESW claims, 115 CBR claims, two Clutter claims, two Castle claims, and 19 ESS claims with title held by Allegiant Gold (U.S.) Corporation. In addition, Allegiant Gold (U.S.) holds an option on 84 SSM and AZ claims acquired from the Hilger Family Trust.

### 1.2 Eastside Area Exploration and Mining History

There is no recorded mineral production from the Eastside portion of the property. Only one historical prospect adit and a few shallow prospect pits are scattered across the property. Old drill pad sites, as well as access roads to the sites, remain visible in the eastern margin of the property, but no data is available to confirm that drilling was ever conducted.

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In the late 1970s a prospector working for Cordex collected several samples from the northern part of what later became the Eastside property. The assays detected measurable gold. In 1999, Mr. Larry McIntosh collected another 184 rock-chip samples from a nearby area. Elevated gold was detected and McIntosh staked the first four Eastside claims. The property was expanded and subsequently leased to Newmont Mining and later to Cordex. Both of these companies carried out surface exploration work, but no drilling.

### **1.3** Castle Area Exploration and Mining History

Modern exploration began in the 1970s, with a few drill holes by ASARCO and Noranda Inc., followed in 1979 by an extensive program of shallow drilling by Houston Oil and Minerals ("HOM"). Claims centered on what later became the historical Boss mine were optioned in 1981 by Falcon Exploration ("Falcon"), who proceeded to delineate the Boss area mineralization. Homestake Mining Company ("Homestake") optioned Falcon's peripheral claims in 1987 and discovered gold mineralization under pediment cover south of Black Rock. Homestake relinquished the claims in 1987. Concurrent with the Homestake program, Falcon constructed the small, open-pit heap-leach Boss mine. During 1988 and 1989 the Boss mine produced approximately 32,000 ounces of gold from about 544,300 tonnes of material.

Westley Exploration Inc. and Mintek Resources optioned the Boss area claims from Falcon in August 1988 and undertook a surface exploration and drilling program. During this time the Berg area gold mineralization was discovered south of the Boss mine.

In 1992, Kennecott Exploration staked claims northeast of the Boss mine and drilled 65 RC holes between 1993 to 1995 to discover the Castle mineralized zone east of the Boss mine. Fischer-Watt Gold Company ("FWG") purchased the Kennecott claims in 1996 and staked additional claims around the periphery of the Kennecott block. Ground to the west and south, including the Berg and Black Rock zones, had become open and was staked by Platoro West Inc. ("Platoro") earlier in 1996.

In 1998 Cordex leased the FWG claims, conducted RC drilling and estimated historical "Geologic Resources" for the Castle, Black Rock and Berg zones. This historical estimate is not in accordance with NI 43-101 and Allegiant is not treating these historical resources as current mineral resources. The resources presented in Section 14.3 supersedes this estimate and is the Current Resource for Castle.

Glamis Gold acquired Rayrock Resources in 1999 and the Castle project was terminated. Later in 1999, Platoro acquired the FWG claims, thereby consolidating the property. Seabridge Resources Inc. ("Seabridge") leased the consolidated Castle area claims from Platoro in August 2000. No exploration work was conducted by Seabridge. Columbus (now Allegiant) acquired the Castle area property from Platoro and Seabridge in February 2017.

### 1.4 Geology and Mineralization

The Eastside and Castle property is located at the eastern flank of the Monte Cristo Range in western Nevada within the Walker Lane structural belt. The Walker Lane is host to several past and presently producing epithermal gold-silver deposits of greater than one million ounces of gold.

Along the east flank of the Monte Cristo Range, volcanic and associated volcanic-sedimentary rocks of Cenozoic age overlie Paleozoic marine rocks of the Palmetto Formation. Of particular importance are the



7.2 Ma high-level rhyolite domes, plugs and related pyroclastic deposits which host most of the gold and silver resources at the Eastside area of the project. At Castle the host is a 22.2 Ma andesite sandwiched between Paleozoic basement rocks and overlying gravel.

At the Eastside area, two sub-parallel, north-trending zones of gold and silver mineralization have been intersected with drilling, extending over 1km in a north-south direction, 700m east-west, and 500m vertically. Both zones are dominantly hosted in rhyolite. The Eastside deposit is open to the south, west and at depth.

Gold and silver mineralization at Eastside displays many classic low-sulfidation epithermal features. The low-grade gold domain is a halo of disseminated mineralization largely inside and to a lesser extent adjacent to the rhyolite as large irregular shapes mimicking the rhyolite dome geometry. The style of mineralization of the higher-grade zones are not distinct and may be controlled by high-angle and moderate-angle contacts between rhyolite and andesite in the east and west zones, respectively, and also likely related to contacts between successive intrusive phases of rhyolite. While internal, successive, intrusive-phase-related controls to mineralization are geologically reasonable, those shapes are in some cases somewhat speculative and geologically inferred. Silver mineralization is volumetrically smaller than the gold and lies mostly within the gold domains, but silver does not correlate with gold on a sample-by-sample basis.

Gold mineralization at the Boss mine and the Berg, Black Rock and Castle zones is associated with quartz stockwork and quartz-calcite-pyrite vein zones, and quartz-adularia, illite-pyrite and quartz-alunite alteration. Mineralization is largely concealed beneath gravel and is mainly hosted by andesite of the Blair Junction sequence, as well as underlying and overlying rhyolite units. In places the mineralization may extend into the Paleozoic basement rocks, although no resources were estimated in them.

## 1.5 Quality Assurance / Quality Control ("QA/QC")

The author believes that the Eastside area drilling, sample preparation, analytical and sample security procedures provided samples that are representative of the material sampled and of sufficient quality for use in classifying resources to Inferred category. A low bias in the pre-2016 field-duplicate reversecirculation ("RC") samples compared to the originals was found and deserves further attention. That high bias in database values is partially offset by results from certified standards that show a slight low bias in the database values.

Historical drilling information for the Castle area has been compiled, evaluated and verified, and no QA/QC analyses had been conducted. The ten exploration groups' drillhole geologic logging and gold analyses corroborate each other and present sufficient confidence for Inferred classification. In spite of that, MDA was quite restrictive on where mineralization was allowed to project because reported *"adverse"* and *"high volumes"* of water encountered during drilling may have affected the quality of samples.

### 1.6 Metallurgical Testing and Mineral Processing

Three preliminary metallurgical studies of mineralized material from the Eastside area gold-silver deposit have been conducted starting in 2014. All the tests were cyanide-leach bottle-roll tests on RC drill cuttings



and were conducted by Kappes, Cassiday and Associates, in Reno, Nevada. This metallurgical work is not sufficient to accurately predict mill and heap-leach recoveries of gold and silver at Eastside, but the test results are sufficient to conclude that Eastside mineralization is amenable to cyanide extraction. Heap leach extractions are expected to be around 70% and 20% for gold and silver, respectively, using a three-stage crushing procedure. Milling with a fine grind is expected to result in extractions over 90% and around 50% for gold and silver, respectively.

Little information is available regarding metallurgical testwork or actual recoveries from production at the Boss mine. The majority of the few data that do exist indicate that metallurgical recoveries by cyanide leaching will be achievable. Essentially all the mineralization is oxidized based on logged geologic data in the Castle database. Historical operators reported production from the Boss mine averaged about 85-90% recovery from their stated grade of 0.06oz Au/ton. Kennecott did one set of cold-cyanide shaker tests on samples that averaged 95% extraction. And Cordex reported "average recoveries in samples with >0.005oz Au/ton are indicated to be approximately 63%."

### 1.7 Mineral Resource Estimate

### 1.7.1 Eastside Area Resource Estimate

Presently the Eastside area gold and silver deposit is defined over almost a kilometer and a half in a northsouth direction, 700m wide (east-west) and almost 500m in vertical extent. The deposit remains open to the south, west and at depth. A significant outcome of Allegiant's work has been the development of a good geologic model, based on 168 drill holes in the resource area, which provided the basis of the current resource estimate.

The drilling database from which the estimate was made has 36,923 gold assays and 14,163 silver assays. The assigned densities range from 2.15g/cm<sup>3</sup> for volcaniclastic sedimentary rocks and steam-heated altered rhyolite, to 2.6g/cm<sup>3</sup> for undifferentiated basement Paleozoic rocks. The principal rhyolite host rock was assigned a density value of 2.35g/cm<sup>3</sup>.

The underlying Eastside area geologic model of intrusive rhyolite domes cutting a sequence of andesitic volcanic and volcaniclastic rocks provided the foundation of the resource model. The geology was modeled on east-west cross sections spaced 40m apart. Using the geologic model as a guide, gold and silver domains were interpreted based on drill-sample grades and guided by geology on the same 40m sections.

Two gold domains were defined, one greater than ~0.04g Au/t and one greater than ~0.3g Au/t. One silver domain was defined above ~3g Ag/t. The low-grade gold domain is a halo of mineralization largely inside and to a lesser extent around the rhyolite as large irregular shapes mimicking the rhyolite geometry. The higher-grade gold domain is smaller and generally forms more linear zones, but also more irregular zones parallel to rhyolite boundaries. There are indications that higher-grade domains within the rhyolite may be related to internal rhyolite intrusive contacts. While this is geologically reasonable, and in some areas the domains have been modeled that way, some of those shapes are somewhat speculative. The domains can extend outside of the rhyolite into andesite units where about 15% of the mineralized material occurs. Just under 80% of the mineralization is oxidized, though there is no relationship yet determined between



oxidation and cyanide recovery. Silver mineralization is volumetrically smaller than the gold, lies mostly within the gold domains, and does not correlate well with gold on a sample-by-sample basis.

Capping for each domain was determined by first assessing the grade above which the outliers occur. Caps of 3.0g Au/t, 15.0g Au/t, 1.0g Au/t, 150.0g Ag/t, and 5.0g Ag/t were applied for low-grade gold, high-grade gold, outside gold, inside silver, and outside silver domains, respectively. In total, 14 samples were capped in the low-grade gold domain, 17 samples were capped in the high-grade gold domain and 23 samples were capped in the silver domain. Samples were composited to 3m lengths after capping.

Four Eastside resource estimates were completed: polygonal, nearest neighbor, inverse distance to the third power, and kriged; the inverse distance to the third power is the reported estimate. The block model is not rotated, and the blocks are 6m north-south by 6m vertical by 6m east-west.

### **1.7.2** Castle Area Resource Estimate

Presently the Castle gold deposit is defined within three deposits all within an area of 3km<sup>2</sup>. The subhorizontal tabular deposits lie predominantly within andesitic rocks and to a much lesser extent rhyolite, both lying on Paleozoic basement rocks.

The drill database on which the deposit is modeled has 504 mostly historical drill holes. The drilling database from which the estimate was made has 11,402 gold assays. Silver was not modeled. The assigned densities range from 2.4g/cm<sup>3</sup> to 2.6g/cm<sup>3</sup> and the overlying gravel was assigned 1.8g/cm<sup>3</sup>.

Two gold domains were defined, a halo around  $>\sim 0.08$ g Au/t and one  $>\sim 0.3$ g Au/t. The gold domains are disseminated mineralization largely within the andesite as horizontal tabular shapes. The domains can extend into the rhyolite but by far the dominant host rock is andesite. There are indications that higher-grade domains include some vertical controls, but they are impossible to define with the current all-RC drilling database. The lack of core drilling contributes to the classification of mineralization as Inferred.

Caps of 2.0g Au/t, 7.0g Au/t, and 2.0g Au/t were applied for the low-grade halo, main gold domain, and outside the gold domains, respectively. In total, one sample was capped in the low-grade halo domain, three samples were capped in the high-grade gold domain and three samples outside the domains. Samples were composited to 3m lengths after capping.

Four Castle resource estimates were completed: polygonal, nearest neighbor, inverse distance to the third power, and kriged; the inverse distance to the third power is the reported estimate. The block model is not rotated, and the blocks are 6m north-south by 6m vertical by 6m east-west.

### **1.7.3 Eastside and Castle Property Resources**

The author classified the Eastside and Castle property resources giving consideration to the confidence in the underlying database, sample integrity, analytical precision/reliability, and geologic interpretations. Because of the complex geology caused by multiple rhyolite intrusions and because the factors that control the distribution of mineralization are not fully understood, all material in these estimates is classified as Inferred. The largest impediment to higher classification was the incomplete understanding of the controls on mineralization, and at Castle, the dominance of historic data, wet RC drilling, and lack of core drilling to detail geologic controls of mineralization. Presently we assume that, at Eastside, the controls are



dominantly internal structures in the rhyolite, and possibly lithologic and structural controls in the andesite rocks. At castle the controls appear to be a favorable lithologic host. The author has used his judgment with respect to the technical and economic factors likely to influence the "*prospects for eventual economic extraction*" and believe that all cutoffs listed below could eventually be a basis for economic extraction of the resource. The resource is reported at a cutoff of 0.15g Au/t, calculated and supported by costs existing today for envisioned open-pit heap-leach scenarios. Table 1.1 and Table 1.2 present the estimate of Inferred resources at Eastside and Castle, respectively.

Cutoff	Tonnes	Grade	Ounces	Grade	Ounces
g Au/t		g Au/t	Au	g Ag/t	Ag
0.15	61,730,000	0.55	1,090,000	4.4	8,700,000

### Table 1.1 Eastside Inferred Gold Resources

### **Table 1.2 Castle Inferred Gold Resources**

En	Entire Model - Inferred (pit constrained)				
Cutoff	Tonnes	g Au/t	Ounces Au		
0.15	19,986,000	0.49	314,000		

### 1.8 Conclusions and Recommendations

The Eastside and Castle gold-silver property is still in its early stages with respect to exploration and resource definition. Work to date has been good quality deserving higher classification resources than Inferred. With additional drilling, particularly core, those Inferred resources should be upgraded to higher classification. The property has good potential to encounter new resources beyond just offsetting openended mineralization.

The Eastside and Castle gold-silver property deserves a long-term commitment. Justified expenditures for the first phase of exploration would be around \$3.7 million, as shown in Table 1.3. With more core drilling there should be a better understanding of the controls on mineralization, which likely will upgrade the resource to Measured or Indicated. After Phase I is completed, a decision would have to be made as to whether to proceed with a second phase of exploration with a cost likely to be well in excess of Phase I.



## Table 1.3 Cost Estimate for the Recommended Program of Phase I

Category	Qty	USD	Unit Cost	
Eas	tside			
Permitting		\$60,000		
Deep exploration drilling (core)	4,800m	\$1,176,000	\$245	/m
Exploration drilling - East Pediment (RC)	4,000m	\$360,000	\$90	/m
Exploration drilling - South Target (RC)	5,500m	\$550,000	\$100	/m
Exploration drilling - Western Anomaly (RC)	4,000m	\$400,000	\$100	/m
Metallurgy - Bottle Roll Tests		\$45,000		
Metallurgy - Heap Leach Tests		\$140,000		
Road Building		\$180,000		
Field Personnel		\$300,000		
Reporting and geologic studies		\$150,000		
Contingency (rounded)	5%	\$170,000		
Sub-total for Eastside Area (rounded to 10,000)		\$3,530,000		
Ca	stle			_
Permitting		\$100,000		
Ground magnetic survey		\$10,000		
CSAMT survey		\$40,000		
Contingency (rounded)	5%	\$10,000		
Sub-total for Castle Area		\$160,000		
Total (rounded to 100,000s)		\$3,700,000		



## 2.0 INTRODUCTION AND TERMS OF REFERENCE (ITEM 2)

Mine Development Associates ("MDA"), a division of RESPEC, has prepared this Technical Report and updated resource estimate for the Eastside and Castle gold-solver property, located in Esmeralda County, Nevada, at the request of Allegiant Gold Ltd. ("Allegiant"), a British Columbia corporation that was spun off from Columbus (US Property Holding) Corporation ("Columbus"). Allegiant holds its 100% ownership interest in the Eastside and Castle property through its wholly owned subsidiary Allegiant Gold (U.S.) Ltd. [formerly known as Columbus Gold (U.S.) Corporation] and an agreement dated January 12, 2012 with Cordilleran Exploration Company, LLC ("Cordex") of Reno, Nevada.

This report has been prepared in accordance with the disclosure and reporting requirements set forth in the Canadian Securities Administrators' National Instrument 43-101 ("NI 43-101"), Companion Policy 43-101CP, and Form 43-101F1, as well as with the Canadian Institute of Mining, Metallurgy and Petroleum's "CIM Definition Standards - For Mineral Resources and Reserves, Definitions and Guidelines" ("CIM Standards") adopted by the CIM Council on May 10, 2014. The Effective Date of the Eastside mineral resource estimate reported herein is July 18, 2021. The Effective Date of the Castle mineral resource estimate reported herein is May 21, 2021. The Effective Date of this Technical Report is July 30, 2021.

### 2.1 **Project Scope and Terms of Reference**

The purpose of this report is to provide a technical summary of the updated mineral resource estimate of the Eastside gold-silver deposit and a first-time estimate of the Castle gold deposit under NI 43-101 reporting guidelines, both in support of the information disclosed in the Annual Information Form ("AIF") and Short Form Prospectus. This report builds on and supersedes the NI 43-101 reports of Ristorcelli (2016), prepared for Columbus, and Ristorcelli (2017) titled "*Amended Updated Resource Estimate and Technical Report, Eastside Gold-Silver Property, Esmeralda County, Nevada*", prepared for Allegiant with an Effective Date of December 30, 2020. The mineral resources herein were estimated and classified by Mr. Steven J. Ristorcelli, C.P.G. an Associate of MDA\RESPEC, according to the CIM Standards. Mr. Ristorcelli is a qualified person under NI 43-101 and has no affiliations with Allegiant, Columbus, or Cordex, except that of an independent consultant/client relationship.

The Eastside and Castle gold-silver project is focused on an area of multiple, low-sulfidation, epithermal gold-silver deposits mainly within volcanic rocks. Since January 2012 exploration work for the project has been conducted by Cordex on behalf of Columbus and subsequently Allegiant according to the terms of a services agreement with Columbus most recently renewed January 1, 2019. The scope of this report included a review of pertinent technical reports and data provided to MDA by Allegiant relative to the general setting, geology, project history, exploration activities and results, methodology, quality assurance, interpretations, drilling programs, and metallurgical testing. The author has relied on the data and information provided by Allegiant for the completion of this report, including the supporting data for the estimation of the mineral resources, which the author considers appropriate and reliable.

Mr. Ristorcelli visited the Eastside area on March 16, 2016, accompanied by Michael Gustin, PhD and Senior Geologist for MDA, and again on May 5 and 6, 2016. While on site, Ristorcelli reviewed drill core, core-logging and related procedures, exploration practices, and evaluated the geology and drilling. Mr. Ristorcelli and Mr. Gustin were accompanied by Dr. Andy Wallace, Mr. Pete Chapman, Mr. Doug McGibbon, Mr. Jim Greybeck, and Mr. Kevin Marks of Cordex. In addition, Mr. Ristorcelli visited the



Cordex office in Reno, Nevada on numerous dates in the last five years. In January 2018 control of the Eastside property was transferred from Columbus to Allegiant. Throughout this ownership change, Cordex continued to supervise exploration activities. On April 8, 2021 Mr. Ristorcelli visited both the Castle area after drilling was completed, and the Eastside area while drilling was ongoing.

The author has relied almost entirely on data and information derived from work done by Cordex for Columbus and Allegiant. Mr. Ristorcelli has conducted site visits and reviewed much of the available data and has made judgments about the general reliability of the underlying data. 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. The author has made such independent investigations as deemed necessary in his professional judgment to be able to reasonably present the conclusions discussed herein.

The project name, Eastside and Castle, is derived from the two areas with defined resources: Eastside at the north end and Castle at the south end. Eastside is a large, mineralized zone dominantly lying within intrusive rhyolite domes. Castle historically has included four sub-areas: Castle, Berg, Black Rock, and Boss, which includes the now-closed Boss mine. Mineralization at Castle is associated with andesite that lies over Paleozoic sedimentary rocks. Adularia Hill is an exploration target lying between Castle and Eastside that has had some drilling.

### 2.2 Frequently Used Acronyms, Abbreviations, Definitions, and Units of Measure

In this report, measurements are generally reported in metric units unless specified otherwise, such as in cases where laboratory information was originally reported in Imperial units. For other data MDA has made the conversions as shown below.

Currency, units of measure, and conversion factors used in this report include:

Linear Measure		
1 centimeter	= 0.3937 inch	
1 meter	= 3.2808 feet	= 1.0936 yard
1 kilometer	= 0.6214 mile	
Area Measure		
1 hectare	= 2.471 acres	= 0.0039 square mile
<b>Capacity Measure (liquid)</b>		
1 liter	= 0.2642 US gallons	
Weight		
1 tonne	= 1.1023 short tons	= 2,205 pounds
1 kilogram	= 2.205 pounds	

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



### Frequently used acronyms and abbreviations

AA	atomic absorption spectrometry
Ag	silver
Au	gold
asl	above sea level
cm	centimeters
core	diamond core-drilling method
°C	degrees centigrade
°F	degrees Fahrenheit
ft	foot or feet
g/t	grams per tonne
ha	hectares
ICP	inductively coupled plasma analytical method
in	inch or inches
K-Ar	Potassium-Argon
kg	kilograms
km	kilometers
kV	kilovolt
1	liter
lb	pound or pounds
μm	micron
m	meters
Ma	million years old
M.D.B&M.	Mount Diablo Baseline and Meridian
mi	mile or miles
mm	millimeters
MW	megawatt
NSR	net smelter return
OZ	ounce
ppm	parts per million
ppb	parts per billion
QA/QC	quality assurance and quality control
RC	reverse-circulation drilling method
RQD	rock-quality designation
t	metric tonne or tonnes
ton	Imperial short ton



### **3.0 RELIANCE ON OTHER EXPERTS (ITEM 3)**

The author is not an expert in legal matters, such as the assessment of the legal validity of mining claims, private lands, mineral rights, and property agreements in the United States. The author did not conduct any investigations of the environmental, permitting, or social-economic issues associated with the Eastside and Castle project, and the author is not an expert with respect to these issues.

The author has fully relied on Dr. Andy Wallace, principal of Cordex and Board Member of Allegiant, and Mr. Peter Gianulis, President and CEO of Allegiant, to provide complete information concerning the legal status of Allegiant and related companies, as well as current legal title, material terms of all agreements, and material environmental and permitting information that pertain to the Eastside and Castle project. A title report on certain unpatented mining claims at the Eastside property, dated February 13, 2017 by Tracy O. Guinand, Mineral Landman, was part of the information supplied by Dr. Wallace for previous versions of this Technical Report.

Section 4.0 in its entirety is based on information provided by Allegiant, Mr. Gianulis and Dr. Wallace, and the author offers no professional opinions regarding the provided information.



## 4.0 **PROPERTY DESCRIPTION AND LOCATION (ITEM 4)**

The author is not an expert in land, legal, environmental, and permitting matters. This section is based on information provided to MDA by Allegiant. The author presents this information to fulfill reporting requirements of NI 43-101 and express no opinion regarding the mineral tenure, legal or environmental status of the Eastside project.

### 4.1 Location and Access

The Eastside and Castle property is located in southwestern Nevada, USA, on the east flank of the Monte Cristo Range, 35km northwest of the town of Tonopah as shown in Figure 4.1. The center of the property is at approximately 38° 10' North Latitude and 117° 37' 16" West Longitude.

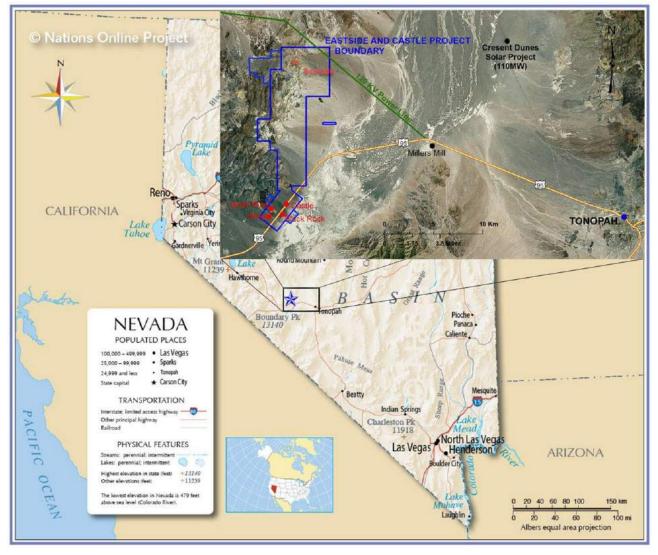


Figure 4.1 Location Map for the Eastside and Castle Property

Note: Base map from http://www.nationsonline.org, a website for world-wide maps, political, administrative and cultural information. Claim locations are approximate.



### 4.2 Land Area

The Eastside and Castle property consists of 973 unpatented lode mining claims in northern Esmeralda County, Nevada (Figure 4.2) that cover approximately 8,289 hectares. These include 35 Eastside claims, 358 ES claims, 215 DP claims, 140 PF claims, three ESW claims, 115 CBR claims, 84 Hilger Trust (SSM and AZ) claims, 19 ESS claims, two Clutter claims and two Castle claims. The claim block lies within:

- Sections 4, 5, and 9 of unsurveyed Township 3 North, Range 38<sup>1</sup>/<sub>2</sub> East;
- Sections 4, 5, 6, 7, 8, 9, 16, 17, 18, 19, 20, 21, and 30 of partially Surveyed Township 3 North, Range 39 East;
- Sections 4, 8, 9, 16, 17, 20, 21, 28, 32, and 33 of unsurveyed Township 4 North, Range 38<sup>1</sup>/<sub>2</sub> East;
- Sections 3, 4, 6, 7, 9, 10, 15, 16, 18, 19, 20, 21, 22, 27, 28, 29, 30, 31, 32, 33, 34, and 35 of unsurveyed Township 4 North, Range 39 East, M.D.B&M.
- Section 4 of unsurveyed Township 2 North, Range 38½ East;
- Section 6, unsurveyed Township 2 North, Range 39 East;

A listing of the individual claim names and their U.S Bureau of Land Management ("BLM") serial numbers is presented in Appendix A. Each of Allegiant's claims were located using a handheld GPS and marked with four 5.08cm x 5.08cm corner posts and a 5.08cm x 5.08cm location monument (post). The claims have not been surveyed by a professional land or mineral surveyor.

The BLM administers unpatented claims on Federal lands under the Mining Law of 1872. Allegiant has represented that all of the claims are valid until August 31, 2021. The annual fees include Bureau of Land fees of \$165 per claim (\$160,545), county fees of \$12 per claim (\$11,676) plus a single \$12 fee for a total of \$172,233 per year for the current 973 claims comprising the property.

Under the Mining Law of 1872 the holder (locator) of mining claims on BLM-administered land has the right to explore, develop and mine minerals on their claims without payment of royalties to the Federal Government. The holder has full surface rights to the claims, subject to applicable State and Federal environmental permit requirements. Nevada taxes on mining are calculated both against royalties paid to property owners or claim holders, and also against the net proceeds of mining. Royalties paid to property owners or claim holders are taxed at 5% with no deductions. If net proceeds of a mine in the year exceed \$4 million, the tax rate is 5% of the net proceeds. If it is less than \$4 million the tax rate is as outlined in Table 4.1, below.

Nevada mine taxation is likely changing in 2021/2022 to become a 1% royalty similar to a Net Smelter Return royalty. The Nevada legislature has not published final rules for the nature and administration of this royalty.



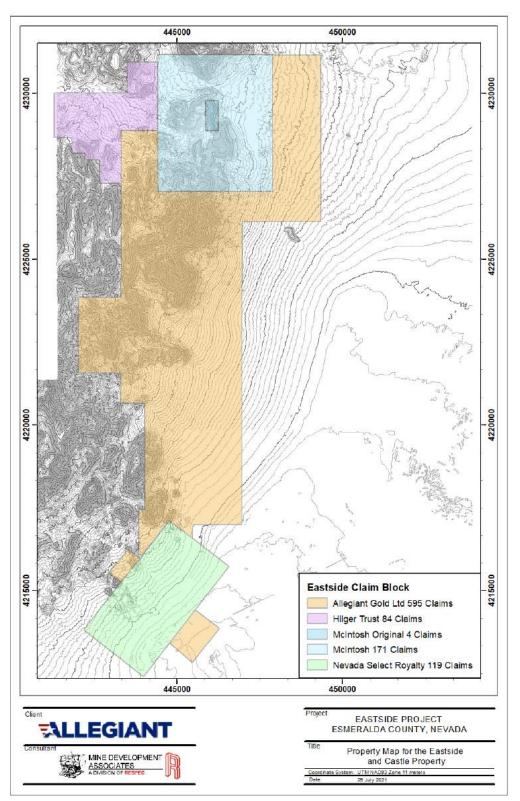


Figure 4.2 Property Map for the Eastside and Castle Property

Note: Castle area claims denoted by "Nevada Select Royalty" refers to the Cordex 2.0% NSR.



# Table 4.1 Schedule of Nevada Net Proceeds Tax<br/>(Prior to Potential Changes in 2021/2022)

Net Proceeds as a % of Gross Proceeds	Net Proceeds Rate of Tax %
Less than 10	2.0
10 or more but less than 18	2.5
18 or more but less than 26	3.0
26 or more but less than 34	3.5
34 or more but less than 42	4.0
42 or more but less than 50	4.5
50 or more	5.0

## 4.3 Agreements and Encumbrances Pertaining to Allegiant

### 4.3.1 Mineral Lease Agreement between Cordex and McIntosh

Originally the property consisted of 4 claims, Eastside 1-4, all of which had title under the name of Larry and Susan McIntosh ("McIntosh"). The agreement signed April 3, 2009 and recorded in Esmeralda County, Nevada (Document #0173631), covered the leasing for the Eastside claims from Larry and Susan McIntosh (the lessor) to Cordex. It covered the details of the lease of the claims including Cordex's obligations to keep the claims in good standing, an Advance Royalty, and a Production Royalty.

The Advance Royalty, subject to Cordex's right to terminate the agreement, required that the following amounts are paid to the Lessor as an advance royalty:

- \$5,000 paid on execution of the Agreement for year 1,
- \$10,000 for year 2 of the agreement,
- \$15,000 for year 3 of the agreement,
- \$20,000 for year 4 of the agreement,
- \$25,000 for year 5 of the agreement, and
- \$50,000 for each year thereafter.

This Advance Royalty required that for years 4 and beyond (paid on the 3rd effective anniversary date onwards, annually) the payments be adjusted for inflation or deflation as set out in the Consumer Price Index published by the U.S. Department of Labor, Bureau of Labor Statistics. All Advance Royalty payments are deductible cumulatively as a credit against the Production Royalty. The 2020 payment was for \$61,670.89 and was paid in March 2021.

The Production Royalty owed to McIntosh under the lease agreement is a 2.0% Net Smelter Return royalty ("NSR"). Allegiant has an option to permanently reduce the royalty rate to 1.0% at any time during the agreement by paying McIntosh \$1.5 million.



The Production Royalty applies to not only the original four Eastside 1-4 claims, but also all claims subsequently located by either party within an Area of Interest ("AOI"). This AOI covers any mining claims fully or partially within a rectangle drawn from intersecting lines drawn parallel to, and one mile from, the original four Eastside 1-4 claims as shown in Figure 4.2.

The surface within the Eastside and Castle property is managed by the BLM. There is no private surface or Nevada State land within the property.

### 4.3.2 Mineral Lease Agreement between Allegiant and the Hilger Family Trust

Allegiant announced on July 7, 2021, that it had entered into a Memorandum of Understanding to acquire 84 SSM and AZ claims from the Hilger Family Trust. These claims border the main Eastside claim group on its northwestern corner. Payments to the Hilger Trust are a 3% NSR royalty on production from the claims (up to 2% of the 3% can be bought by Allegiant for \$1,000,000 per each 1% but a 1% NSR is perpetual); 60,000 Allegiant shares upon signing a definitive agreement; and a cash payment of \$10,000 on the third anniversary of the agreement along with \$30,000 in Allegiant shares; and additional yearly payments escalating from \$15,000 to \$25,000 per year at year 6 of the agreement. Yearly share payments are \$30,000 in Allegiant shares starting on the third anniversary and escalate to \$50,000 in Allegiant shares at year 5.

### 4.3.3 Agreements between Allegiant, Columbus and Cordex

Beginning on January 1, 2012 Columbus and Cordex entered into an agreement titled "Amended and Restated Cordex Agreement". This agreement defined the title Columbus held for several properties in Nevada provided by Cordex for Columbus, as well as for services provided by Cordex. After the formation of Allegiant on January 12, 2018 and through June 30, 2019, this agreement defined the title Allegiant has for several properties in Nevada provided by Cordex for Allegiant, and for services provided by Cordex for Allegiant. Under the agreement, Cordex provided services for Allegiant including: acting as an operator for Allegiant on existing properties covered by the agreement; carrying out exploration and development activities on these properties on behalf of Allegiant; designing and carrying out generative exploration activities in Nevada, and elsewhere in the U.S. where mutually agreed, on behalf of Allegiant; and acting as operator for Allegiant on all new properties.

Since expiration of the above agreement on June 30, 2019, the principals of Cordex, Dr. Andy Wallace and Mr. Bruce Delaney, have worked as consultants for Allegiant. All claims and leases have been transferred to Allegiant.

The agreement also sets out a royalty on new properties for Cordex: for new claims staked by Cordex the royalty is a 2.0% NSR; for claims or interests acquired from third parties burdened by an NSR, the Cordex royalty is the difference between 4.0% and the existing third party royalties, but not to exceed 2.0% nor be less than 1.0%; and for claims or interests burdened by a different kind of royalty payment other than an NSR the parties will mutually agree to a Cordex royalty that is not less than the monetary equivalent of a 1.0% nor more than 2.0% NSR.

As it applies to the Eastside property this means that all claims fully or partially within the AOI, whether title is held by Cordex or McIntosh, are subject to a 4.0% NSR, half of which is due to Cordex and the other half due to McIntosh. The claims outside the AOI are subject only to a 2.0% NSR due to Cordex.



### 4.3.4 Transfer of Claims and Agreements

On April 2, 2014, a Quit Claim Deed (Document # 0191192) was recorded in Esmeralda County, Nevada. The deed transfers title of the McIntosh claims to McIntosh Exploration LLC, a Nevada limited liability company.

On November 12, 2015, a Mining Deed and Assignment With Reservation of Royalty (Document # 0195922) was recorded in Esmeralda County, Nevada. The deed transfers title of the Cordex claims to Columbus reserving, however, unto Cordex the Cordex Royalty. Additionally the deed assigns the McIntosh Cordex Mineral Lease Agreement (Document #173631) to Columbus.

On February 11, 2016, an Amended Memorandum of Mineral Lease Agreement (Document # 0197656) was recorded in Esmeralda County, Nevada. The Amended Memorandum amends the Mineral Lease Agreement (Document # 173631) to include all the claims in the McIntosh AOI.

### 4.3.5 Castle Claims Agreements

In February 2017, a total of 119 CBR, Castle and Cluster claims were added to what is now the Allegiant property position when Columbus acquired the exclusive right to explore and mine these unpatented lode mining claims that are more particularly described in Appendix A hereto (the "Castle Claims"). Columbus' leasehold interest in the Castle Claims is based on an Amended and Restated Mining Lease and Agreement dated January 12, 2016 between Platoro West Incorporated, also known as Platoro West Inc. ("Platoro"), as lessor and Seabridge Resources Inc. ("Seabridge") as lessee, an Assignment and Assumption of that lease dated February 21, 2017 from Seabridge to Columbus, and an Amendment of Mining Lease dated February 21, 2017 by Platoro, as lessor, and Columbus, as lessee (as so amended, the "Castle Lease"). To obtain the leasehold rights in the Castle Claims, Seabridge was paid 1,500,000 common shares of Columbus and Platoro was paid 250,000 common shares of Columbus. Since then, the Castle Claims have been conveyed by Platoro to Nevada Select Royalty, Inc. ("Nevada Select") and the Castle Lease has been assigned by Platoro to Nevada Select, such that Nevada Select is now the lessor under the Castle Lease. As lessee under the Castle Lease, Allegiant is required, among other things, to make annual advance royalty payments to Nevada Select, and to pay Nevada Select a 2.0% NSR from the sale of any metals produced from the Castle Claims, which royalty may be reduced at any time during the term of the Castle Lease from 2.0% to 1.0% upon Allegiant's payment of \$2,500,000 to Platoro. Cordex is also entitled to a 2.0% NSR on any mineral production from the Castle Claims, in accordance with the terms of a 2017 Cordex Services Agreement between Columbus and Cordex. The term of the Castle Lease continues for so long as Allegiant continues to make certain payments to Nevada Select (unless sooner terminated as provided in the Castle Lease), but the Castle Lease cannot extend beyond August 15, 2099. Public notice of the Castle Lease and Columbus' leasehold interest in the Castle Claims is provided by a Notice of Mining Lease recorded in Esmeralda County as document number 206994.

### 4.4 Environmental Permitting - Eastside

Federal Regulations that govern the exploration activities and surface disturbance at Eastside are BLM Surface Management Regulations 43 Code of Federal Regulations ("CFR") 3809, as amended. Activities are also regulated by Nevada Revised Statutes and Nevada Administrative Code ("NAC") 519A.



Between March 2011 and May 2015, Cordex operated under a BLM Notice of Intent ("NOI"), number N-88808. The NOI allowed up to 2.0235 hectares of disturbance. Between March 2011 and December 2013, Cordex engaged in three rounds of drilling resulting in approximately 1.80 hectares of disturbance.

In April 2014, Columbus entered into a contract with JBR Environmental Consultants, Inc., which was later purchased by Stantec Consulting Services Inc., of Reno, Nevada, to prepare an Environmental Assessment at Eastside and a new BLM Plan of Operations ("Plan") to allow construction of 180 drill pads, drill roads and staging areas. On September 9, 2014 the Nevada Division of Environmental Protection ("NDEP") approved a Class 2 Air Quality Operation Permit, Surface Area Disturbance (Permit # AP1041-3524) for the project. The NDEP's Bureau of Mining and Reclamation ("BMRR") approved the Reclamation Permit (Permit # 0373) for the project on May, 25, 2015.

On May 26, 2015 the BLM approved the Plan of Operations (Permit # N-093181) for the Eastside exploration work. The Decision Notice and Finding of No Significant Impact were based on the Environmental Assessment ("EA") prepared for the BLM covering the following activities:

- Total disturbance of 16.27 hectares;
- Construction of 180 drill pads;
- Construction of up to 1,7830.9 linear meters of temporary roads;
- Improvement and use of existing roads;
- Construction of staging areas;
- Reclamation of all project related disturbances at the end of the project life; and
- Estimated life of the project is 10 years.

The approved activities are required to comply with all applicable laws, regulations and policies. The proposed actions, including environmental protection measures, required mitigation measures, monitoring and all other stipulations defined in the EA, have been determined to not significantly affect the quality of human environment and an Environmental Impact Statement is not required.

On May 27, 2015 Columbus placed a \$177,900 cash bond (NVB001904) with the BLM. In September 2018, as per BLM requirement to recalculate bonds every three years, the bond was increased to \$185,800. The funds will be retained in a suspense account until all terms and conditions of the operation have been fulfilled or until a satisfactory replacement bond has been accepted.

All the above permits are in full compliance as of the date of this report. All the recommended Phase I expansion drilling proposed in Section 25.0 of this report can be done, with some exceptions, under the permits expected to be granted soon, according to Wallace and Gianulis. The exceptions for drilling would be with respect to two eagle's nests found near the expanded permit area of 3600 acres. Current rules do not allow for drilling within a one-mile radius during nesting periods unless an Eagle Take Permit has been obtained. Allegiant believes it is prudent, though not necessary, to obtain an Eagle Take Permit from the U.S Fish and Wildlife Service in the event they want access year-round to a specific drill site in the affected one-mile radius within the expanded permit area.

Allegiant entered into a contract with Stantec Consulting Services, Inc., of Reno, Nevada to prepare and file a new Environmental Assessment and Plan of Operations at Eastside. The plan is for drilling and drill-site construction of 162 drill sites and enlarging the area of the Operating plan from 601 acres to 3,600 acres. This new plan is still under review by the BLM and the State of Nevada.



### 4.5 Environmental Permitting – Castle and Adularia Hill

Environmental permitting for the Castle portion of the property began in late 2020 and the work was completed in October through December 2020. Allegiant filed a Notice of Intent for drilling 49 holes. This plan and a subsequent amendment were approved by the BLM and that Notice of Intent is still active. The total bond as of November 2020 is \$12,504. The bond is held through the Nevada Bond Pool.

In 2018, Allegiant submitted a BLM Notice of Intent ("NOI") to permit exploration drilling in the Adularia Hill portion of the property. This NOI allowed up to 2.0235 hectares of disturbance and a total of 21 holes were drilled.

### 4.6 Environmental Liabilities

Apart from the surface disturbances permitted under the approved Plan, which will require reclamation, there are no environmental liabilities at the Eastside area of the project. In the Castle portion of the property there may be liabilities associated with the heap-leach pad of the historical Boss mine, which operated during the late 1980s.

The author is unaware of any other significant factors and risks that may affect access, title, or the right or ability to perform work on the property.



# 5.0 ACCESSIBILITY, CLIMATE, LOCAL RESOURCES, INFRASTRUCTURE, AND PHYSIOGRAPHY (ITEM 5)

### 5.1 Access to Property

Access to the Eastside portion of the project is via paved U.S. Highway 6 and 95, proceeding north on the county-maintained Gilbert – Crow Springs gravel road located 11km west of Miller's mill (Figure 4.1), for approximately 10km to the northern part of the property. Access into the property includes unmaintained unpaved roads at several points 8-12km from the highway. Cordex has built and maintains approximately 12.5km of roads within the property for year-around exploration access. The Castle portion of the property is traversed by U.S. Highway 6 and 95, as well as a network of unmaintained unpaved roads.

### 5.2 Climate

The property is located in the Basin and Range physiographic region, characterized by linear mountain ranges separated by flat, largely arid valleys or basins. Vegetation is sparse and typical for the region with the predominant flora being shadscale and sagebrush. Summers are hot and dry with occasional thunderstorms; winters are cold with occasional snow, but little accumulation. Total precipitation averages less than 13cm per year. As a result, the property is accessible year round for exploration purposes except on rare occasions in winter where snow might accumulate, or in summer if thunderstorm runoff damages access roads. Monthly climate data for Tonopah, 35km to the east, is summarized in Table 5.1.

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
Avg Max. Temp (C)	6.8	9.4	13.2	17.4	23.1	29.0	33.1	31.8	27.0	20.2	12.1	7.2	19.2
Avg Min. Temp (C)	-7.1	-4.6	-2.2	0.8	5.7	10.6	13.8	12.8	8.7	2.9	-3.2	-7.0	2.6
Avg Total Precip (cm)	1.0	1.2	1.2	0.9	1.4	0.8	1.3	1.3	1.1	1.0	1.0	0.7	12.9
Avg Total Snowfall (cm)	7.6	7.4	5.8	2.8	1.0	0.0	0.0	0.0	0.0	0.3	3.6	4.8	33.0
Avg Snow Depth (cm)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

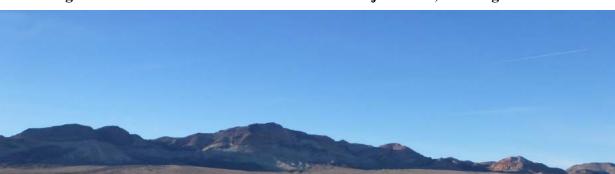
 Table 5.1 Monthly Average Temperature and Precipitation, Tonopah, Nevada

 (from Whitehead, 2015)

### 5.3 Physiography and Vegetation

The property is situated along the east flank of the Monte Cristo Range (Figure 5.1) and varies from about 1,500m to about 2,200m in elevation. Gently sloping alluvial fans and sub-horizontal pediments comprise the eastern part of the project area. Parts of the project area include rugged peaks and ridges. Vegetation consists of sparse desert brush and grasses as shown in Figure 5.1. Several locations favorable for potential heap-leach pads, potential processing plant sites and waste-rock storage facilities are present.





### Figure 5.1 View of the Eastside and Castle Project Area, Looking Northwest

#### 5.4 Local Resources and Infrastructure

The nearest population center is the small, historic mining town of Tonopah, the county seat of Nye County, Nevada, which is located 35km southeast of the project area. As of the 2010 census it had a population of ~2,500. The town is served by U.S. Highway 6 and U.S. Highway 95, which connect the area to Reno and Las Vegas and serve as major commercial trucking routes. There is a general aviation facility at the Tonopah airport. The closest large commercial airports are at Las Vegas and Reno, Nevada. Tonopah has restaurants, hotels, hardware stores, fueling stations for gasoline and diesel, a rural hospital, and other amenities expected in a town of its size, in addition to what is needed to serve the highway traffic and tourists.

Readily accessible power is available from a 120kV power line that passes through the northern portion of the Eastside claim block. The now-shut down Crescent Dunes Solar Energy Project, a 110MW solar-thermal electric generating plant, the largest molten-salt power tower in the world, is located a few kilometers to the east of the property.

A shallow water well is present within the property, but it is not currently permitted for use. Water is known to be shallow in the bordering basin to the west. An abandoned 30.5cm-diameter drill hole has water standing at 7.62m down hole. The water table in the basin is also known to be quite shallow at Miller's mill to the southeast, and also at the historical Boss mine.

Skilled mining, industrial construction and engineering labor and services, as well as mining equipment and supplies, are available in the Reno-Carson City and Las Vegas areas for small- and large-scale projects.



### 6.0 HISTORY (ITEM 6)

The Eastside and Castle project area is relatively close to the major historical gold and silver mining districts of Tonopah and Goldfield, the small, past-producing Gilbert district, and includes the past-producing Boss mine.

### 6.1 Eastside Area History

There is only one historical prospect adit and a few shallow prospect pits scattered across the Eastside portion of the property. There is no recorded mineral production. In 1991, Canyon Resources Corp. proposed a 900m, 6-hole, reverse-circulation ("RC") drill program. Old drill pad sites, as well as access roads to the sites, remain visible in the eastern margin of the property, but no data is available to confirm that drilling was ever conducted and no data for this program, if any exists, is available to MDA.

In the late 1970s a prospector working for Cordex collected several samples from the northern part of what later became the Eastside property. The assays detected measurable gold, but the results did not meet Cordex's requirements at the time. Following up for Cordex on those samples, in 1999 Mr. Larry McIntosh, an independent prospector, collected 184 rock-chip samples from a nearby area. The 184 surface rock chip samples collected by McIntosh in 1999 were assayed by ALS Chemex ("Chemex"). Of the 184 samples assayed, 39 samples had gold grades greater than 0.10g Au/t, and 7 samples assayed greater than 1.00g Au/t. Again, the grades were insufficient for a Cordex project at that time, so McIntosh staked the first four claims (Eastside 1-4).

McIntosh staked an additional 31 claims at Eastside and subsequently leased the property to Newmont Mining Corporation ("Newmont"). A total of 411 rock-chip samples and 43 stream-sediment samples were collected and analyzed by Newmont, and a seven-line controlled-source, audio-frequency, magneto-telluric ("CSAMT") survey was conducted. Newmont's rock-chip samples were mainly collected in a grid comprised of 12 lines. The stream-sediment samples were taken from streambeds that are fed by the principal stream drainages in the northern portion of the property but are dry except for times of run-off from large-rainfall storms.

Gold assay results for the McIntosh and Newmont surface samples are shown in Figure 6.1.

During September 2004, Zonge Geosciences Incorporated ("Zonge") conducted a CSAMT geophysical survey on behalf of Newmont which was comprised of seven lines, 1,600m in length, spaced 300m apart, and oriented east-west for a total of 11.2 line-kilometers (Figure 6.2). The CSAMT results were presented as color-shaded pseudo sections plotted at a scale of 1:10,000 (Zonge, 2004). One-dimensional inversions of Cagniard resistivity and two-dimensional inversions of the far-field data were included. In these plots, low resistivities were shown with warm colors (red, violet) and high resistivities were shown in cool colors (blue, white). The data were presented as a smooth-model inversion which shows gradational changes in resistivity, rather than abrupt changes, irrespective of the actual geologic structure.

Newmont exited the lease agreement in 2004.



Figure 6.1 Eastside Area Surface Samples and Gold Assays 1999 – 2004 (from Whitehead, 2015)

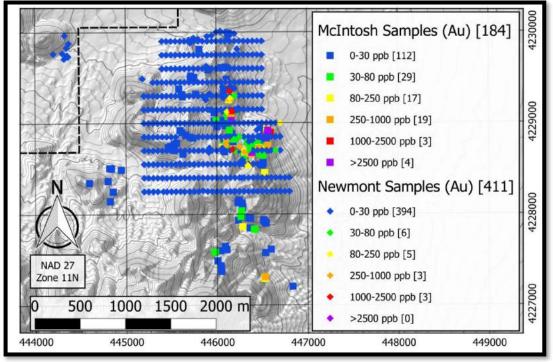
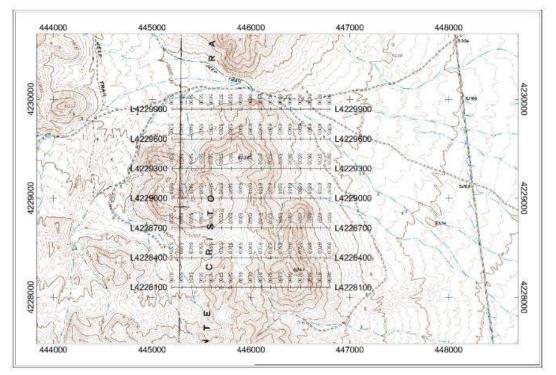


Figure 6.2 Eastside Area CSAMT Lines for Newmont by Zonge, 2004 (from Whitebread, 2015)





### 6.1.1 Columbus Surface Samples

Cordex leased the McIntosh claims at Eastside in 2009 and expanded the property. After leasing the property, Cordex collected 530 rock-chip samples from bedrock exposed within the property. These samples contained gold ranging from <0.005g Au/t to 7.95g Au/t. The gold assays defined a nearly continuous mineralized zone of north-trending, silicified breccia, with a strike length of more than 900m. Most of the samples from that zone exceeded 0.15g Au/t, with samples from several areas containing from 0.8 to 3.5g Au/t.

From 2010 to September 2016 Cordex collected an additional 2,580 surface-rock chip samples within the limits of the Eastside property. Results from these and previous samples have identified seven individual gold anomalous zones delineated by grades greater than 0.030g Au/t. Assays of the Cordex surface samples demonstrate a significant statistical correlation between gold and silver grades (r = 0.80). Detection limits for mercury were too high to allow meaningful correlations between mercury and either gold or silver. Other elements such as arsenic, antimony, and molybdenum are anomalous to highly anomalous in areas mineralized with gold and silver.

### 6.1.2 Cordex Geologic Mapping

An area of  $\sim$ 5,900 hectares along the east flank of the Monte Cristo Range has been mapped by Cordex geologists (on behalf of Columbus) at a scale of 1:6,000. This area included the entire Eastside claim group, but did not include the Castle claims, which were acquired in February 2017. The geological mapping delineated the stratigraphic and lithologic units summarized in Section 7.1 and defined the aerial extents of the alteration described in Section 7.2.1.

The author has not analyzed the sampling methods, quality, and representativity of surface sampling at the Eastside portion of the property because drilling results form the basis of conclusions and recommendations of this report and for the mineral resource estimate described in Section 14.0.

### 6.1.3 Columbus Eastside Drilling 2011 - 2017

At the direction of Columbus, Cordex began drilling in the Eastside area in 2011 and continued drilling in 2013, 2015 and 2016. A total of 37,434m were drilled in 136 holes exploration holes and one ground-water test hole. This drilling is described in greater detail in Section 10.0 and formed the basis for estimation of the first Eastside mineral resources described in Ristorcelli (2016). In 2017, Cordex drilled an additional 10 RC holes for 2,938m about 8km south of the Eastside estimated resources (Target 5 area). Due to the 8km distance, the Target 5 area drilling is not considered material to the Eastside estimated resources.

### 6.1.4 Allegiant 2018

On January 30, 2018 Columbus transferred ownership of Eastside to Allegiant, a spin off of Columbus. After that date, Allegiant directed and funded the exploration program at Eastside. Work done by Allegiant since this time is described throughout the remainder of the report.

Resources were previously reported in *Resource Estimate and Technical Report, Eastside and Castle Gold-Silver Property, Nevada* dated September 1, 2017 (Table 6.1) and the *Amended Updated Resource* 



*Estimate and NI 43-101 Technical Report, Eastside and Castle Gold-Silver Project, Esmeralda County, Nevada* prepared for Allegiant Gold Ltd. with an Effective Date of December 30, 2019 and dated November 20, 2020 (Table 6.2). Both estimates of resources are superseded by those reported in Section 14.2.

Cutoff	Tonnes	Grade	Ounces	Grade	Ounces
g Au/t		g Au/t	Au	g Ag/t	Ag
0.10	55,620,000	0.41	732,000	2.8	5,016,000
0.11	50,990,000	0.44	716,000	2.9	4,791,000
0.12	46,460,000	0.47	699,000	3.1	4,568,000
0.13	42,310,000	0.50	683,000	3.2	4,359,000
0.14	38,710,000	0.54	667,000	3.3	4,158,000
0.15	35,780,000	0.57	654,000	3.5	3,999,000
0.16	33,470,000	0.60	642,000	3.6	3,866,000
0.17	31,210,000	0.63	630,000	3.7	3,740,000
0.18	29,310,000	0.66	620,000	3.9	3,629,000
0.19	27,870,000	0.68	611,000	3.9	3,537,000
0.20	26,530,000	0.71	603,000	4.0	3,445,000
0.25	22,050,000	0.81	571,000	4.4	3,141,000
0.30	19,130,000	0.89	545,000	4.8	2,936,000
0.35	17,090,000	0.95	524,000	5.1	2,789,000
0.40	15,320,000	1.02	503,000	5.4	2,653,000
0.50	12,500,000	1.15	462,000	6.0	2,410,000

 Table 6.1 Eastside Area Historical Inferred Gold Resources 2017

 Table 6.2 Eastside Area Historical Inferred Gold Resources 2020

Cutoff	Tonnes	Grade	Ounces	Grade	Ounces
g Au/t		g Au/t	Au	g Ag/t	Ag
0.10	84,400,000	0.41	1,104,000	3.5	9,541,000
0.11	77,600,000	0.43	1,081,000	3.7	9,141,000
0.12	71,540,000	0.46	1,059,000	3.8	8,775,000
0.13	65,970,000	0.49	1,036,000	4.0	8,422,000
0.14	61,230,000	0.52	1,016,000	4.1	8,111,000
0.15	57,050,000	0.54	996,000	4.3	7,838,000
0.16	53,210,000	0.57	977,000	4.4	7,563,000
0.17	49,820,000	0.60	959,000	4.6	7,315,000
0.18	46,870,000	0.63	943,000	4.7	7,089,000
0.19	44,450,000	0.65	928,000	4.8	6,889,000
0.20	42,320,000	0.67	915,000	4.9	6,703,000
0.25	34,960,000	0.77	863,000	5.4	6,098,000
0.30	29,970,000	0.85	819,000	5.8	5,631,000
0.35	26,410,000	0.92	782,000	6.2	5,279,000
0.40	23,520,000	0.99	747,000	6.5	4,940,000
0.50	18,740,000	1.13	678,000	7.2	4,327,000



## 6.2 Castle Area History

The Castle claims, situated contiguous to the south end of the Eastside claims, have a history of exploration dating to the 1940s when gold was discovered by a local prospector at what later became the Boss mine (Figure 4.1 and Figure 6.3). It has been reported that dozer trenches, a 15.2m shaft, two diamond-core and eight rotary drill holes explored gold mineralization that cropped out at the Boss mine site (Seabridge, 2004). Modern exploration began in the 1970s, with a few drill holes by ASARCO and Noranda, Inc, followed in 1979 by an extensive program of shallow drilling, mostly less than 30m deep, by Houston Oil and Minerals ("HOM"). HOM relinquished the project at the end 1979.

The claims centered on the Boss mine were then acquired in 1981 by Ebco Enterprises and optioned in that year by Falcon Exploration ("Falcon"), who proceeded to further delineate and expand the Boss area mineralization. MDA has no information from Falcon's drilling and other exploration activities.

Homestake Mining Company ("Homestake") optioned Falcon's peripheral claims in 1987 and discovered gold mineralization under shallow pediment cover south of Black Rock, an outcrop adjacent to U.S. Highway 6, during their drill program. The gold mineralization near Black Rock defined by Homestake did not meet their requirements at that time and Homestake relinquished the claims in 1987.

Concurrent with the Homestake program, Falcon constructed the small, open-pit heap-leach Boss mine and, in January 1988, poured their first bar of gold doré. Falcon also began an exploration program on the peripheral claims in the spring of that year. Falcon produced approximately 32,000 ounces of gold from about 544,300 tonnes at the Boss mine before it closed in 1989 (Diner and Strachan, 1994).

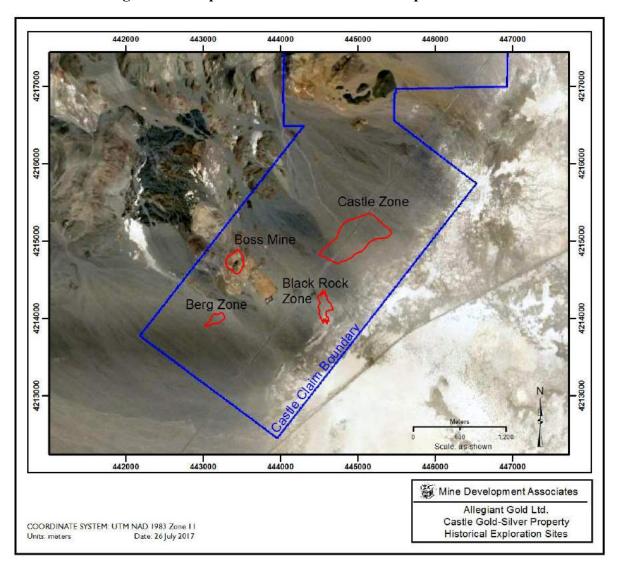
Westley Exploration Inc. ("Westley") and Mintek Resources Ltd. ("Mintek") optioned the Boss area claims from Falcon in August 1988 and undertook a surface exploration and drilling program. During this time, gold mineralization was discovered by drilling under shallow cover just south of the Boss mine. It is referred to as the Berg zone (Figure 6.3). Mintek eventually relinquished their claims in the early 1990s.

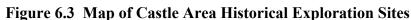
Western Mining drilled 23 holes mostly in areas peripheral to the Berg zone in 1992.

In 1992, Kennecott Exploration ("Kennecott") staked a block of claims northeast of the Boss mine as part of a regional exploration program. Kennecott executed a surface exploration program with initial drilling in 1993. Kennecott eventually drilled a total of 65 RC holes totaling 8,057m, which delineated the broad "Castle" mineralized zone concealed under shallow pediment east of the Boss mine. Kennecott's final RC hole was drilled in August 1995.

Fischer-Watt Gold Company ("FWG") purchased the Kennecott claims in October 1996 and staked an additional 32 lode claims around the periphery of the Kennecott block. The surrounding ground to the west and south, including the Berg and Black Rock zones, had become open and was staked by Platoro earlier in 1996. In January 1998, the FWG claims were optioned by Zephyr Resources.







In 1998 Cordex leased the FWG claims and conducted additional exploration activities, including RC drilling. A total of 4,230m were drilled by Cordex in 30 RC holes. At that time Cordex was a subsidiary of Rayrock Resources Inc. In 1999 Glamis Gold acquired Rayrock Resources and the Castle project was terminated. Later in 1999, Platoro acquired the FWG claims, thereby consolidating the property positions under a single owner.

Seabridge leased the consolidated Castle area claims from Platoro in August 2000. No exploration work was conducted by Seabridge. Columbus acquired the Castle area property via the December 2016 Option Agreement with Platoro and Seabridge, and then exercised the Option in February 2017.

Known historical drilling in the Castle claims is summarized in Section 10.7. Much more drilling apparently was conducted, but records have not been found.



Cordex geologists estimated "Geologic Resources" for the Castle, Black Rock and Berg zones of gold mineralization in 1999 prior to implementation of NI 43-101. All three areas together totaled 11.2 million short tons with an average grade of 0.024oz Au/ton (Greybeck, 1999). This historical estimate (Table 6.3) was made using manual polygonal methods with sets of 1:1,200-scale cross sections. This estimate is relevant only for historical completeness and is not in accordance with requirements of NI 43-101. Allegiant is not treating these historical resource estimates as current mineral resources and the author cautions the reader that this estimate should not be relied upon. All historical estimates are superseded by those presented in Section 14.3.

	Tons	Grade (oz Au/t)	Grade (g Au/t)	Ounces
Castle Zone	9,051,000	0.025	0.86	229,783
Black Rock Zone	1,271,415	0.018	0.61	22,726
Berg Zone	855,346	0.024	0.82	20,664
Total	11,177,761	0.024	0.82	273,173

Table 6.3	Summary of Historical "Geologic Resources", Castle Area					
(from Greybeck, 1999)						

A resource estimate was prepared by Bickerman Engineering & Technology Associates, Inc. ("Bickerman") in October 2000 prior to Canada's implementation of NI 43-101. Bickerman on behalf of Seabridge Resources Inc. reported resources shown in Table 6.4. This estimate is relevant only for historical completeness and is not in accordance with requirements of NI 43-101. Allegiant is not treating these historical resource estimates as current mineral resources and the author cautions the reader that this estimate should not be relied upon. All historical estimates are superseded by those presented in Section 14.3.

	Tonnes	g Au/t	Ounces Gold
Castle Zone	15,008,752	0.48	229,437
Berg-Boss Zone	4,752,802	0.46	70,446
Berg-Boss Zone	569,605	0.46	8,417
Total Project	20,331,159	0.47	308,300

#### Table 6.4 Historical "Resource" Estimate at Castle and Berg-Boss Zones (from Bickerman, 2000)

Work done by Allegiant is described throughout the remainder of the report. All historical resources are superseded by those reported in Section 14.3.



### 7.0 GEOLOGIC SETTING AND MINERALIZATION (ITEM 7)

### 7.1 Geologic Setting

### 7.1.1 Regional Geology

The Eastside and Castle property is located at the eastern flank of the Monte Cristo Range in western Nevada near the border with California (Figure 4.1), in a structurally complex part of the Great Basin portion of the Basin and Range geomorphic province. The Basin and Range province began developing about 15 Ma as the result of crustal extension that began when the North American plate over-rode the East Pacific Rise.

The typical geomorphology of the Basin and Range province consists of north- to north-northeast-trending mountain ranges that are separated by elongate, normal-faultbounded basins filled with sediments derived from the ranges. This pattern has been modified near its western boundary by the >700 km long by >100 km wide zone of right-lateral, northwest-trending faults known as the Walker Lane structural belt and, within it, the east-northeast trending, left-lateral Mina deflection.

The Walker Lane is host to several past and presently producing epithermal gold-silver deposits of greater than one million ounces of gold, including Goldfield, Tonopah, Rawhide, Paradise Peak, Bodie, Aurora and Comstock. Both high-sulfidation and low-sulfidation styles of epithermal deposits are present and all of the deposits formed during Miocene time.

The oldest rocks present in the region are marine, shallow-water shelf rocks of the upper Proterozoic Wyman Formation and upper Proterozoic to lower Cambrian Reed Dolomite. These formations are separated by the Roberts Mountains thrust fault from overlying siliceous eugeoclinal rocks of Cambrian to Devonian ages that resemble the Ordovician Palmetto Formation. However, Stewart (1980) expressed doubt in assigning these rocks to the Palmetto Formation because of their broader range in age. The name 'Palmetto Formation' has been historically used in the Castle area and this report will continue that usage, particularly since it is such a good descriptor of the rocks. The Roberts Mountains thrust and the Antler fold and thrust belt developed during the Devonian-Mississippian Antler orogeny, which can be traced from Idaho through Nevada and into southeastern California.

Another regional thrust fault, formed during the Permo-Triassic Sonoma orogeny and known as the Golconda thrust, emplaced chert and shale of the Permian Mina Formation over Palmetto-type rocks in the Eastside region. The Golconda thrust has a mapped trace broadly similar to that of the Roberts Mountains thrust, but is located slightly to the west, and both parallel the inferred western margin of the Precambrian North American continent. Elsewhere in the Monte Cristo Range area, local exposures of Mississippian and Permian rocks are present in the Golconda allochthon as well (Stewart et al., 1994), but the Golconda thrust is not exposed within the project area.

During Oligocene and Miocene time much of the region was blanketed by intermediate-composition lavas erupted from local volcanic centers and by extensive felsic ash-flow tuff units erupted from nested and overlapping calderas in central Nevada. After the onset of regional crustal extension at ~15 Ma, volcanism in the region was mainly bimodal basalt-rhyolite in nature and more restricted in aerial extent.



The Walker Lane is a complex crustal shear zone comprising mainly northwest-trending, dextral strikeand oblique-slip faults that began to develop about 13 Ma to take up some of the relative motion between the Pacific and North American tectonic plates inboard from the San Andreas Fault. Presently the Walker Lane accounts for approximately 25% of the relative motion between the Pacific and North American plates.

Regional structural and tectonic studies completed by several workers have been summarized in an unpublished report by VonFerber (2015). Approximately 30km west of the Eastside and Castle project, a prominent zone of east-northeast-trending, left-lateral faults developed beginning at about 3 Ma, defining a major right step in the Walker Lane. This left-lateral, generally eastward-trending transfer zone is known as the Mina deflection, which is interpreted to have accommodated some of the transform movement from the San Andreas Fault system to the central Walker Lane.

An extensional fault system known as the Lone Mountain-Silver Peak detachment fault is located a short distance south and southwest of the Monte Cristo Range and projects beneath it. This fault system was active from about 12 or 13 Ma until 5 Ma, and perhaps as recently as 1.8 Ma. The combination of prolonged and repeated extensional and strike-slip faulting within the Walker Lane near the Eastside and Castle project has allowed repeated episodes of structural ground preparation that have enhanced pathways for volcanic activity and hydrothermal fluid flow in the project area.

# 7.1.2 District Geology – Paleozoic Sedimentary Rocks

Stewart et al. (1994) described the complicated relations of the rock units in the Monte Cristo Range. The Paleozoic basement rocks exposed south and southwest of the Eastside property were assigned by Ferguson et al. (1953) to the Ordovician Palmetto Formation, which correlates with the Vinini and Valmy Formations of central and northern Nevada. In the Monte Cristo Range these rocks include radiolarian chert, graptolitic shale, siliceous argillite, siltstone, fine-grained quartzite, and lesser limestone, as well as sedimentary bedded barite deposited by submarine exhalative processes. Stewart et al. (1994) reported that these rocks range in age from late Cambrian to late Devonian, so there is some uncertainty that these rocks should be assigned to the actual Palmetto Formation.

The Palmetto forms low, rolling hills in the southern part of the Eastside and Castle claim block. The Palmetto rocks are weakly metamorphosed, folded, and faulted, and have been encountered in some of the deeper drilling at Eastside and in numerous shallow holes in the Castle area. The total thickness of the Paleozoic Palmetto rocks is unknown.

### 7.1.3 District Geology – Cenozoic Volcanic Rocks

Throughout most of the Monte Cristo Range, including the area of the Eastside and Castle project, volcanic and associated volcanic-sedimentary rocks form most of the exposed outcrops. Stewart et al. (1994) divided these rocks into five major units. From older to younger, these are: (1) Oligocene and Miocene ash-flow tuffs (24 to 26.7 Ma); (2) and esite flows, tuffs, dacite flows, and intrusive rocks of the Blair Junction sequence (15.7 to 22.2 Ma); (3) fresh-water lake sediments of the McLeans unit; (4) Gilbert Andesite (15 Ma) and (5) a series of rhyolite domes, associated rhyolite tuffs, and basaltic lava flows (7.2 Ma).



# 7.1.4 Property Geology

Mapping of the east flank of the Monte Cristo Range in and adjacent to the Eastside and Castle claim group by Cordex geologists has focused on the definition of detailed stratigraphy of the Cenozoic volcanic and sedimentary units. Of particular importance in the Castle area is the surface complex of late Miocene, high-level rhyolite domes, plugs and related pyroclastic deposits. Stratigraphic units within and near the property are described below from oldest to youngest, with map unit names in bold font

#### Paleozoic Sedimentary Rocks

Cordex did not distinguish different rock units or determine the age of the Paleozoic sedimentary rocks. Instead, they are referred to as "Paleozoic sediments" undivided and sometimes Palmetto Formation.

#### **Cenozoic Rocks**

*Ash-flow Tuffs (late Oligocene)*: three ash-flow tuffs were identified in the area of detailed mapping by Cordex. The Tuff of Crow Springs (**Tt1**) and Tuff of Cedar Mountain (**Tt2**) are exposed in the northwest corner of the Eastside area claims. The Tuff of Crow Springs is a welded, crystal-poor, rhyolitic tuff with lithic fragments and an age date of 26.7Ma. The Tuff of Cedar Mountain is a moderately welded, crystal-rich rhyolitic tuff with an age date of 26.7 Ma. The third unit is the Tuff of Castle Peak (**Tcp**). This unit is found both in the north and southern portions of the claim block. The Tuff of Castle Peak is rhyolitic, white, biotite-rich, devitrified and weakly welded (K-Ar date of 24Ma).

**Blair Junction Sequence (early and middle Miocene)**: in the Eastside and Castle area the Blair Junction Sequence as described by Stewart et al. (1994) consists primarily of a lower subunit of andesite and dacite flows (**Tbja**). The lower andesite is a series of fine-grained, micro-porphyritic flows containing up to 10% hornblende and feldspar laths with very minor clinopyroxene. Propylitic alteration is widespread, and hornblende in outcrop is often rimmed by iron oxides. In drill cuttings, pyrite is common in unoxidized zones. Flow textures are common and include fragments of the Paleozoic sedimentary rocks. A K-Ar date of 22.2 Ma has been obtained from an andesite intrusion and possible feeder of the lower andesite (Stewart et al., 1994). South of the Eastside claims a lower lacustrine tuff unit (**Tbjat**) is off-white to tan, lightly silicified and is interbedded with flows of the lower andesite.

In the southern part of the property, just north of the Boss mine, the lower andesite Tbja is successively overlain by a middle tuff unit and an upper group of rhyodacite flow domes. Stewart et al. (1994) grouped these two units with the lower andesite of the Blair Junction Sequence. The middle tuff unit (**Tbjt**) is a bleached white to light yellow, non-welded, rhyodacite tuff made up of ejecta from the emplacement of the upper rhyodacite unit (**Tbjd**). The upper unit consists of gray to reddish-brown dacite to rhyodacite intrusions, domes, and minor flows. It is fine grained, contains less than 5% hornblende with iron oxide rims and very minor feldspar laths and quartz, and forms large cliffs with columnar jointing. The Tbjd subunit is brecciated in part and contains quartz veinlets, calcite, and/or jarosite on some fractures. The unit has a K-Ar age of 15.7 Ma (Stewart et al., 1994).

*Rhyodacite and Porphyritic Rhyodacite (Miocene)*: flows and domes of rhyodacite and porphyritic rhyodacite (**Trd**); light gray, medium-grained, contains up to 15% phenocrysts of plagioclase, biotite,



quartz, and minor hornblende. It is hydrothermally altered with small veins of quartz, clay, and calcite. In most outcrops, the rhyodacite is flanked by its associated tuff (**Trdt**). The rhyodacite intrudes the lower Blair Junction Sequence and is intruded by the younger rhyolite (Tr, see below), so its age is between 22.2 and 7.2 Ma.

*Older Rhyolite (early Miocene)*: sparsely porphyritic rhyolite (**Tor**) with strong flow-banding and abundant quartz phenocrysts. The intrusive phase of this rhyolite developed large (33m+) zones of vitrophyre (**Torvit**) in contact with the associated older rhyolite tuff (**Tort**). K-Ar age dates are 19.2Ma and 18.6Ma (Stewart et al., 1994). Contains numerous barren quartz veins.

*Sedimentary Rocks of McLeans (middle Miocene)*: includes platy lacustrine siltstone, shale, finegrained sandstone, fresh-water limestone and minor dolomite. This unit (**Tm**) contains abundant interbedded diatomite, with some local plant remains and mollusks, and its thickness ranges from 0 to 30m. The McLeans unit is a useful marker horizon and separates the older Blair Junction andesite flows from the lithologically similar, but younger, flows of the Gilbert andesite (see below). In Cordex drill hole ES-020, a limestone horizon in the McLeans unit has been altered to jasperoid and contains significant gold values.

*Gilbert Andesite (middle Miocene)*: crystal-rich andesite flows, flow breccias, and lahars or epiclastic volcanic sediments (**Tga**). Phenocrysts of plagioclase, clino- and orthopyroxene, and hornblende are euhedral to subhedral and range in size from 1 to 4mm. Columnar jointing is common and much of the unit is massive and resistant, capping many of the highest hills in the Monte Cristo Range. The flows appear to have been erupted from a vent area west of the Eastside and Castle property. K-Ar dates place the Gilbert andesite at approximately 15Ma (Stewart et al., 1994).

**Rhyolite (late Miocene)**: variably flow-banded to massive, mostly aphyric and devitrified rhyolite (**Tr**). The rhyolite commonly occurs as flow domes, many of which are composed of multiple phases, as indicated by changes in flow banding orientations and subtle textural differences. Shown as map unit **Talr** where affected by steam-heated acid-leach alteration. Related near-vent tuff of apparent base-surge type occurs locally with the rhyolite and is described below. In drill core, the rhyolite appears weakly granophyric-textured owing to numerous, very small, aligned, elongated inclusions that might be partially resorbed quartz crystals, quartz-filled vesicles or, less likely, compressed pumice fragments. Minor rhyolite dikes are also present. Subunits include:

*Vitrophyre (Tvit)* is present within individual rhyolite domes as bands of black, amber, or bottlegreen, nearly aphyric volcanic glass up to several meters wide. It occurs along the outer margins of individual domes or intrusive pulses and at what appear to be contacts between multiple rhyolite domes or discrete zones within individual domes, indicating multiple pulses of intrusion. The published K-Ar age of 7.2Ma for the rhyolite (**Tr**) was determined on black obsidian (apache tears) from one of the domes (Stewart et al., 1994).

**Rhyolite Tuff** (*Trt*) rhyolitic tuff, tuff breccia, and tuffaceous sedimentary rocks, in part consists of base surge deposits with graded or wavy bedding. Shown as map unit **Talt** where affected by steam-heated acid-leach alteration. Bedding thickness ranges from a few centimeters to 1m thick. Resistant where locally silicified; often forms black cliffs. This map unit also includes volcanic sandstone, siltstone, and clast-supported conglomerate, and is mainly composed of ejecta and eroded material derived locally from the Tr rhyolite. The domes are the likely source of the



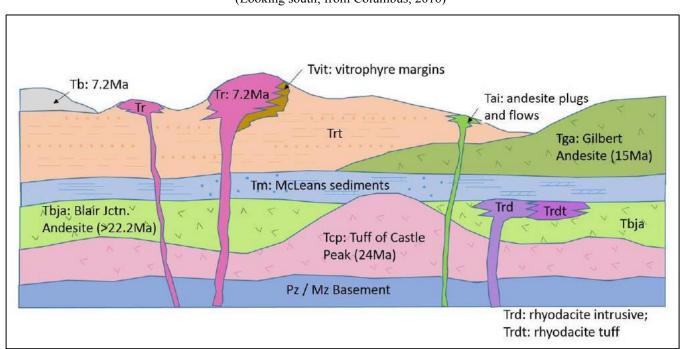
rhyolitic material in the tuff breccia as well. Locally, fragments of andesite or Paleozoic basement are also present.

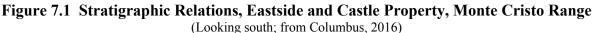
**Basalt (late Miocene)**: map unit (**Tb**) is black, vesicular basalt with small phenocrysts of olivine and plagioclase; forms scattered outcrops throughout the Eastside and Castle claim block. These rocks are petrologically similar to the large basalt flows that make up much of the western Monte Cristo Range. The basalt has been dated by K-Ar methods at 7.2Ma (Stewart et al., 1994).

*Andesite (late Miocene)*: map unit (*Tai*) is hornblende andesite comprising plugs and dikes; youmger than 7.2 Ma.

General stratigraphic relations of the map units described above are shown by the conceptual cross section in Figure 7.1, which refers to the east flank of the Monte Cristo Range. A geologic map of the Eastside area of drilling, and the corresponding correlation chart for the map units described above are shown in Figure 7.2 and Figure 7.3, respectively.

The intrusion and aerial distribution of the rhyolite domes were largely controlled by north- to northeasttrending faults. Detailed mapping has revealed that there are more than forty individual rhyolite domes exposed in the project area, with plan dimensions ranging from a few tens of meters to approximately 0.5km in size. Many of the domes appear to be composed of multiple phases of lithologically similar rhyolite as the result of successive pulses of magma joining to form a multi-phase, complex dome.





Note: Figure is not limited to the area of drilling; includes units such as Tuff of Castle Peak (Tcp) exposed south of the Eastside area of drilling. PZ/MZ Basement refers to pre-Cenozoic rocks, undivided.



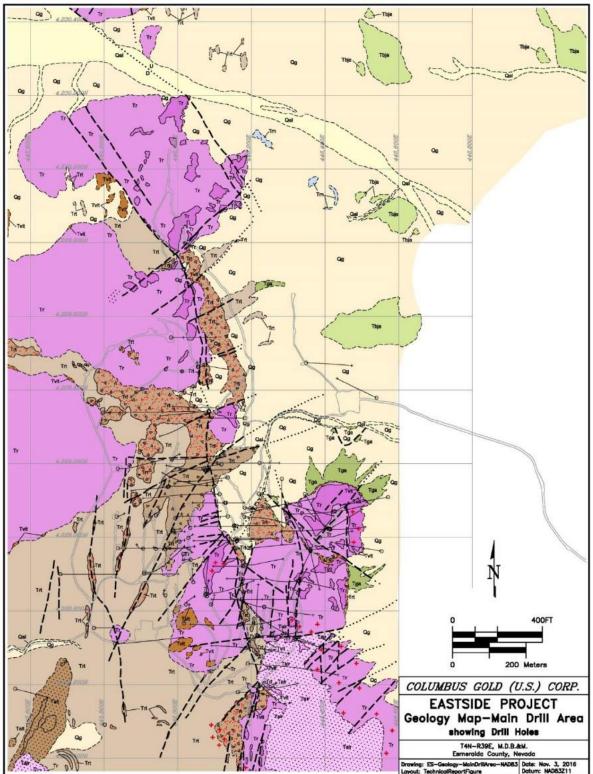
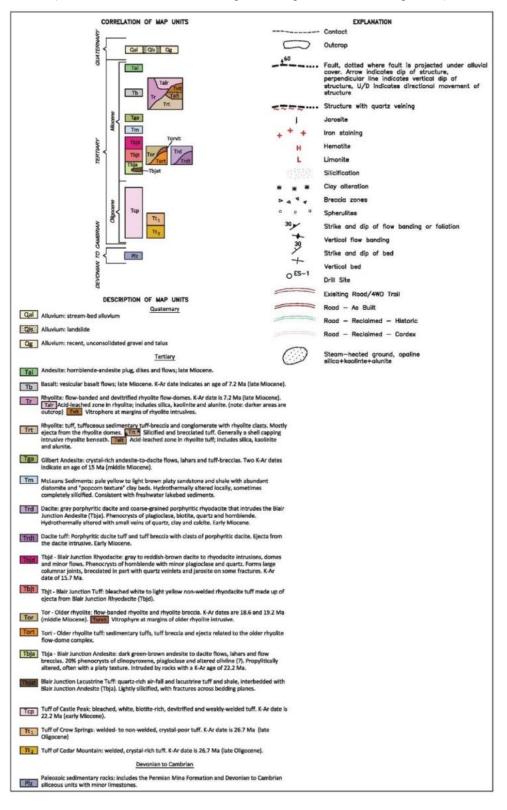


Figure 7.2 Detailed Geologic Map of the Eastside Drilling Area (from Columbus, 2016)



#### Figure 7.3 Map Legend and Correlation Chart, Eastside and Castle Project Area

(from Columbus, 2016; not all map units are present in area of Figure 7.2)





Richnow (1999; 2000) discussed a number of theoretical considerations related to rhyolite dome emplacement and post-emplacement features, cited or summarized numerous field studies and mapping in dome fields worldwide, and described detailed studies he had personally made of domes that are relevant to Eastside. That work provides excellent support for the pulsed intrusion concept, with multiple fracturing events. In view of the Richnow (1999; 2000) work, Allegiant interprets the domes at Eastside to be exogenous in character rather than endogenous. That is, the domes were the result of repeated outbreak of moderately viscous masses during numerous pulses of magma injection, rather than that the domes each represent a single intrusive event, with the dome inflating internally like a balloon. Some of the controls of mineralization internal to the rhyolite are speculated to result from structural and textural changes caused by the multiple intrusions.

## 7.2 Eastside Area Mineralization

The following sections are based on detailed mapping of the surface by Cordex geologists, combined with logging of drill core and RC drill chips.

## 7.2.1 Alteration

Cordex geologists have delineated several types of alteration at the Eastside portion of the project. These can be grouped as silicification and veins, clay alteration, acid-leached alteration (steam heated), propylitic alteration, and oxidation.

**Silicification** – Wide areas of pervasive silicification are present in the rhyolite domes. It typically consists of massive chalcedonic replacement near surface, and grades downward to more crystalline, finegrained quartz replacement at depth. Locally the rhyolite tuff is also strongly silicified. Pervasive silicification of the porous rhyolite tuff is especially common in the area of gold mineralization where it forms bold outcrops, in contrast to the unaltered tuff which is more friable and recessive.

**Silica Veins** – Narrow, discontinuous veins of amorphous silica, chalcedony and fine-grained quartz are present within areas of silicification and mainly range from millimeter-wide fracture fillings to a few centimeters in width along numerous structures and extension fractures. Many drill samples contain several forms of veins in the same interval. Vein textures include jigsaw, colloform, quartz-after-calcite (fish scale), and banded or crustiform styles. A petrographic report by Albinson (undated) on a drill sample stated "*An early breccia stage is cemented by very fine-grained "jigsaw" crystalline quartz. A second phase of fine-grained jigsaw quartz (that forms the matrix of later breccia) cross-cuts the early breccia. The second phase has dendritic iron oxide as well as rare cubic pyrite along discrete bands. A final stage of crystalline quartz is also present. The same sample has a multistage chalcedonic silica with framboidal iron oxide on discrete bands. This sample was from shallow in the hydrothermal system and temperatures of homogenization are <150C."* 

The quartz veins are locally beneath the acid-leached and clay alteration, associated with zones of silicification. At the surface, minerals associated with the siliceous veins include amorphous iron oxides, jarosite, adularia, tourmaline, fibrous cryptomelane, pyrolusite, barite, and molybdenum oxide (ilsemannite). Jarosite is also found in the silicified zones adjacent to many of the veins, giving the silicified rock a caramel-brown color. Adularia is not highly abundant but is present in banded quartz veins and possibly replacing the rhyolite groundmass.



In places the vitrophyre unit is cut or coated by gray, coarse-grained calcite veins which are associated with higher gold grades and, often, with anomalously high silver grades. This is particularly common in the "West Zone" mineralized area, described below.

**Steam-heated acid-leached alteration** – Zones of acid-leached alteration have been delineated capping several rhyolite domes at Eastside. Short-wave infrared spectrometer ("SWIR") scans of samples from these areas show some are composed of mixtures of amorphous hydrous silica (opal) and kaolinite. In other samples, the groundmass of the rhyolite has been replaced by opal and alunite. In some areas leached cavities remain where spherulitic devitrification textures were present before alteration. Only the original quartz phenocrysts remain unchanged by the hydrothermal alteration process. In some samples alunite is abundant and is locally associated with kaolinite.

This style of opal-alunite-kaolinite alteration is known in many areas of the world where active geothermal systems have been studied, and in many low-sulfidation epithermal deposits. It results from the condensation of steam and oxidation of H<sub>2</sub>S in the vadose zone above boiling of deeper hydrothermal fluids. In such steam-heated zones, the steam condensate becomes acidic from the oxidation of H<sub>2</sub>S and leaches the enclosing rock, leaving open voids and depositing opal, kaolinite and alunite. Hydrothermal kaolinite may make up as much as 40% of the acid-leached zones at Eastside. Zones of this alteration mark the sites of underlying potential exploration targets.

The acid-leached cappings found on the tops of some domes indicate that the gold mineralization and silicification occurred very near the paleosurface. It also suggests that minimal erosion has occurred since the emplacement of the domes and the gold mineralization.

**Clay alteration** -- The SWIR was also used to study the alteration clay mineral assemblage in 40 samples of clay-rich rocks taken from surface outcrops and drill road cuts. Eighty percent of these samples contained illite and the remaining samples contained kaolinite.

**Propylitic alteration** -- Propylitic alteration within the Gilbert and Blair Junction sequence andesites forms a halo around the area of gold mineralization. This alteration includes pervasive chlorite throughout the rocks together with calcite that occurs both as fracture-filling veins and in disseminated patches or spots in the matrix, where it formed by the alteration of calcic feldspar. Clots and disseminated grains of pyrite are common, mainly in cubic form, although some pyritohedra are present. Marcasite is locally present, although not common. Propylitic alteration gives the andesite a distinct light blue/gray color.

**Oxidation** -- The most visible feature of alteration at Eastside is pervasive hematite staining of the rhyolite domes. The hematite is believed to be derived from oxidation of fine-grained disseminated pyrite that has been observed in drill samples. All the domes in the area of known gold mineralization exhibit strong hematite staining. Pinpoint- to pinhead-sized specks of red, and less frequently, black hematite in rhyolite bodies are seen near, and often within, gold mineralized zones cut by drill holes. In contrast, rhyolite domes to the north of Eastside show no hematite coloration and no quartz veining or anomalous gold. The bottom of the oxidized rock is sub-parallel to much of the mineralization.

Drilling at Eastside indicates that the pervasive hematite gives way to limonite and/or hematite+limonite mixtures at depth. Limonite staining is strongest in the vicinity of the major structures and occurs with jarosite in the areas of higher-grade gold mineralization in both rhyolite and the underlying andesite. The limonite also appears to be related to the fine-grained disseminated pyrite found in the intrusive rhyolite



at depth. The limonite is found both as fracture coatings and as limonite pseudomorphs after tiny pyrite crystals.

Oxidation at Eastside extends below the depth of most of the drill holes. The few holes that penetrated unoxidized material either encountered propylitized andesite containing pyrite near the contact with oxidized rhyolite or, less frequently, unoxidized rhyolite in deep drill holes. The rhyolite at depth also contains oxidized disseminated pyrite cubes which are generally  $<200\mu$ m in size. Cubes of fine-grained oxidized pyrite ("limonite dice") occur locally within the dense quartz veinlets and in some altered rhyolite.

## 7.2.2 Gold – Silver Mineralization

Two major zones of gold and silver mineralization have been intersected with drilling in the Eastside portion of the project. Overall, the mineralization is found extending over 1km in a north-south direction with a vertical extent of 500m and an east-west width of 700m. The low-grade halo is continuous for the entire length, width and depth. These are referred to as the East Zone and the West Zone as further described below, both dominantly hosted in rhyolite. The deposit is open to the south, west and at depth. The two mineralized zones merge over a block of andesite that largely separates them. In other words, the block of andesite is mantled by mineralization over a distance of around 250m.

The East Zone is at least 500m long in the north-south direction. The higher-grade zones within the East Zone are parallel to and possibly controlled by the high-angle contact between rhyolite and andesite, and contacts between successive phases of rhyolite. The East Zone is the shallower of the two zones, and there are anomalous gold grades at surface. At the most southern drilling in the East Zone, the rhyolite dome locally is well mineralized in drill hole ES-100 to as deep as 430m. The East zone remains open at depth further to the south, beneath an area of acid-leached alteration, as well as down-dip and to the west.

The West Zone extends at least 1km in the north-south direction. High-angle control is not as clear here as it is in the East Zone. Recent drilling in the West Zone shows that it is more shallowly dipping and becomes nearly flat in much of the area.

The continuity of gold and silver mineralization known from drilling in both the East and West zones is variable. A representative cross-section showing the sectional dimensions and continuity of mineralization is shown in Figure 14.1.

Gold mineralization at Eastside displays many classic low-sulfidation epithermal features, such as: varied silica phases that comprise the veins containing at least some of the gold and silver; pseudomorphs of silica after original crystalline bladed calcite; banded veins; colloform textures; cockade textures; and others. Visible gold has been observed in drill cuttings and core from a few holes at Eastside, as well as at the surface, but it is not commonly found. The gold seen in drill samples occurred as very fine-grained, wire and plate-shaped forms best detected under a stereo microscope. Allegiant has not studied the silver mineralogy.

Based upon the interpretations from logging cuttings and core from 136 drill holes, the fundamental control over the gold grade distribution appears to have been a series of steeply westward-dipping, subparallel structures. These structures strike more or less northerly. In detail however, gold intercepts in the drill holes do not line up along simple northerly trends. Portions of the domes are characterized by



more intense alteration and discrete zones that contain better gold grades. A number of shells that are more-or-less parallel to the better prepared portions of domes appear to host the better gold grades. These zones may be parallel to the margins of domes, or the margins of the individual intrusive pulses of rhyolite that in aggregate form composite domes, but that remains somewhat speculative in spite of it having been modeled as such.

Two domains of gold mineralization have been identified at Eastside and are each treated separately during estimation as described in Section 14.2.3 of this report. The low-grade domain consists of broader zones of anomalous mineralization that are more evenly distributed around, encompassing, and internal to the rhyolite. The higher-grade domain is composed of fairly discrete zones that contain the higher gold and silver grades. These wrap around individual domes, parallel internal rhyolite contacts, and often form parallel to rhyolite-andesite contacts. In every case, the lower-grade zones surround the higher-grade zones. In some places the gold appears to have been deposited preferentially in vitrophyre, but this is not invariably the case, possibly indicating that vitrophyre has been subjected to, or occupies, zones of better ground preparation.

Gold grades have also been found in silicified and strongly oxidized andesite along and near the contact with the intrusive rhyolite. In some cases, these grades extend farther outboard of the rhyolite, probably controlled by structural or lithologic changes. In hole ES-20, sedimentary rocks of the Macleans unit also host gold and silver values where limestone has been converted to jasperoid. Approximately 80% of the mineralization is hosted by rhyolite and associated vitrophyre. The remaining 20% is hosted by andesite.

Flow banding visible at surface and exposed in road cuts is variably developed. The banding often displays abrupt changes in strike and dip, and in some places flow banding is truncated by younger rhyolite with flow banding with markedly different orientation. In the drilling, most of the better-grade areas appear to be roughly parallel to the margins of individual rhyolite pulses within the domes.

The gold and silver mineralization largely appears to occupy certain more intensely fractured, altered, or more distinctly layered zones that resulted from a combination of: flow banding; early marginal joint development in the solidifying melt; closely-spaced cooling fractures; areas of more active fracturing and brecciation of partially crystallized rhyolite, due to subsequent intrusion pulses; and tectonic or hydrothermal re-activation of older structures. Any of these factors would increase permeability for solution access into and through the rock mass. Moreover, repeated fracturing would provide multiple depressurization events and enable boiling to occur, which is one major factor in the deposition of minerals and metals in epithermal deposits.

A representative geologic cross-section is shown in Figure 7.4.



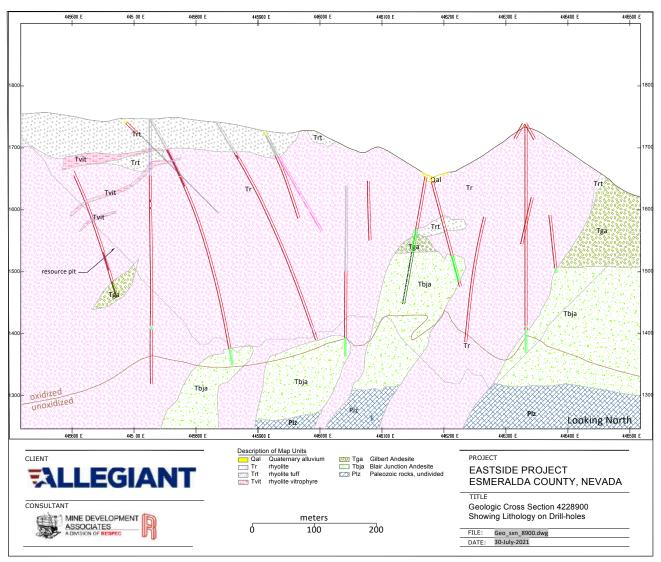


Figure 7.4 Geological Cross Section 4229060N, Eastside Area



### 7.3 Castle Area Alteration and Mineralization

Most of the Castle claims area consists of a low-relief pediment of unconsolidated Quaternary silt, sand and gravel, except in the vicinity of the Boss mine where Miocene andesite units of the Blair Junction sequence, the McLeans sedimentary rocks and the Oligocene Tuff of Castle Peak crop out. The Tertiary volcanic rocks are underlain at shallow depths by siliceous Paleozoic sedimentary units, possibly of the Palmetto Formation. According to Diner and Strachan (1994), alteration within the Tertiary rocks is widespread, varying from mainly propylitic assemblages in the andesite units, to mixed layer clays in the rhyolitic units. These assemblages apparently surround zones of quartz-adularia alteration at the Boss mine and Berg zones, and quartz-alunite in the Black Rock zone (Diner and Strachan, 1994).

## 7.3.1 Boss Mine

Gold mineralization at the Boss mine is mainly hosted by andesite and, to a lesser extent, an underlying unit of rhyolite tuff in a zone of quartz-adularia replacement and quartz veinlet stockworks. The andesite is now recognized as part of the Blair Junction sequence of Stewart et al. (1994). Quartz-calcite-pyrite-adularia veins and veinlets, and their oxidized equivalents, were also present in the Boss mine deposit (Diner and Strachan, 1994).

Allegiant mapping in 2020 identified a number of high-angle structures trending northwest, north, and northeast. The structures are usually altered and can contain quartz-adularia stockwork with occasional massive replacement silicification in the walls of the structures. Allegiant surface mapping also indicated that several members of the Blair Junction Sequence can be differentiated. Work to subdivide the Blair Junction based on drill cuttings has not been completed.

Allegiant sampling of the Boss Mine pit walls support the interpretation of sub-horizontal tabular bodies of mineralization. Field descriptions include two general styles of mineralization in andesite tuff: a) fractures in older andesite, more structurally controlled, with comb quartz and b) clayey veinlets with limonite and quartz. Drilling encountered shallow, mostly low-grade gold mineralization best described as a blanket-like zone at surface to about 30m deep and usually 20 to 40m thick. Gold is hosted in Tertiary andesite and rhyolite tuff, associated with quartz stockworks, iron oxides along fractures, argillization, and occasionally massive silicification. The Tertiary volcanic rocks overlie Paleozoic rocks of the Palmetto Formation, which were encountered at depth in nearly all the drill holes. Essentially all of the mineralization intersected in drilling is logged as "oxide" visually.

### 7.3.2 Berg Zone

The Berg zone mineralization is concealed beneath thin surficial deposits. The mineralization is mainly hosted by andesite of the Blair Junction sequence and underlying or intrusive rhyolite, and to a lesser extent in the Tuff of Castle Peak and underlying Palmetto rocks. According to Diner and Strachan (1994):

"Alteration associated with the Berg mineralization consists of quartz-adularia veinlets and groundmass flooding haloed by illite and, in the higher portions, by upward-flaring montmorillonite-calcite.... Subvertical quartz veinlets in the andesite are host to micronsized gold particles in oxides after pyrite."



Allegiant has not done any drilling at the Berg Zone and knows nothing of this area other than what is recorded in historical maps.

### 7.3.3 Black Rock Zone

The Black Rock zone is concealed beneath as much as 30m of surficial deposits about 120m southeast of the altered and veined Black Rock outcrop of Palmetto Formation. Gold mineralization is mainly hosted by rhyolite tuff, and to a much lesser extent, in the underlying Palmetto Formation. According to Diner and Strachan (1994):

"Quartz-alunite replaces feldspars and groundmass proximal to gold mineralization, becoming kaolinite and illite-montmorillonite progressively to the east. Micron-sized gold particles are spatially associated with quartz-alunitic breccias and anomalous mercury."

Allegiant has done no drilling at Black Rock and knows nothing of this area other than what is recorded in historical maps and reports.

### 7.3.4 Castle Zone

Mineralization in the Castle zone is largely hosted by andesite of the Blair Junction sequence beneath as much as 100m of surficial deposits (Greybeck, 1999). In places, the mineralization is found in an intrusive(?) rhyolite unit, the Tuff of Castle Peak, and the underlying Palmetto Formation. Drilling information compiled by Cordex shows that gold is associated with zones of quartz stockwork.

Allegiant has done no drilling at the Castle Zone and knows nothing of this area other than what is recorded in historical maps and reports.

#### 7.4 Adularia Hill

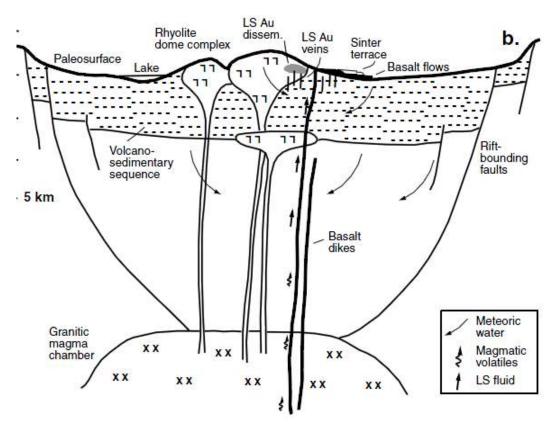
The Adularia Hill area is located about 2km north of the Castle zone. Gold mineralization at Adularia Hill is associated with quartz  $\pm$  adularia stockworks and is hosted by rhyolite, and esite, tuffs, and Paleozoic basement rocks. Interpretation of the drill results at Adularia Hill has not been completed.



### 8.0 **DEPOSIT TYPES (ITEM 8)**

Based upon the styles of alteration, the nature of the veins, the mineralogy and the geologic setting, the gold and silver mineralization at Eastside and Castle is best interpreted in the context of the volcanic-hosted, low-sulfidation type of epithermal model. Various vein textures, mineralization and alteration features at Eastside are typical of low-sulfidation epithermal deposits world-wide. Moreover, surface exposures of acid-leached zones suggest a shallow level of erosion. Figure 8.1, below, from Sillitoe and Hedenquist (2003), is a conceptual cross-section depicting a low-sulfidation epithermal system. The host-rock setting of mineralization at Eastside is somewhat more complex than the simple model shown in Figure 8.1.

### Figure 8.1 Schematic Model of a Low-Sulfidation Epithermal Mineralizing System



(After Sillitoe and Hedenquist, 2003)

An unpublished fluid inclusion study indicates that the temperature of formation of the quartz veins at Eastside was relatively low, at <200°C (Albinson, undated). The drill samples used in this study ranged from 87m to 213m in depth, and generally contain fine- to medium-grained jigsaw-texture quartz. The study indicates that the predominant low-temperature silica-bearing fluids had very low salinity and that the quartz veins were deposited in a shallow, low-sulfidation epithermal environment, probably within 100 meters of the paleo-water table. Various quartz textures were noted that indicate boiling of the hydrothermal solutions occurred. All of these characteristics are typical of low-sulfidation epithermal deposits.



Many other deposits of this class occur within the Walker Lane and elsewhere in the world. Some wellknown epithermal low-sulfidation gold and silver properties with geological similarities to Eastside include the Castle Mountain mine in California, as well as the Rawhide, Sleeper, Hog Ranch and Hycroft mines in Nevada.

The geologic setting of the Castle Mountain mine (Grey et al., 2016) most closely resembles the geologic setting of the Eastside area. Both are hosted by rhyolite domes, and adjacent tuffs, intruded through andesite that overlies older basement units. Styles of alteration and gold-silver mineralization are also very similar.



### 9.0 EXPLORATION (ITEM 9)

Exploration conducted for Allegiant commenced in 2018. In 2018, a total of 22 holes totaling 8,265 meters were drilled around the Eastside resource area as summarized in Section 10.1. Results of this drilling have been incorporated into the updated resource estimate of this report. Additionally, geologic mapping was conducted in the Adularia Hill area and approximately 40 surface samples were collected.

In 2019, Allegiant focused on drilling the Adularia Hill area located 2km north of the Castle Zone, well south of the Eastside resource area. The Adularia Hill drilling is discussed in Section 10.8 of this report.

The Castle area has been mapped. More detailed mapping at a scale of 1:1,200 scale done in the Boss Mine area in 2021.

Allegiant contracted with Farr West Engineering to prepare detailed topographic maps in the overall Castle area. These base maps were used for detailed geologic mapping and in modeling resources in the Boss Pit area.

In 2020 Allegiant contracted Zonge Geophysics, Inc. to run a CSAMT geophysical survey in the pediment area east of the main zone of drilling at Eastside. Fourteen-line miles of CSAMT surveying were completed on thirteen east-west survey lines, spaced 300m apart. Results show resistive materials, similar to the profiles of the gold-hosting rhyolite domes, lie covered under the pediment. The interpretation of the CSAMT flat-lying, shallow (5 to 40m thick), resistive alluvium covering likely flat-lying conductive andesite, all overlying a resistive basement, similar to what is found in the drilled area. Bulbous resistive bodies cutting through the andesite are interpreted as a possible rhyolite domes, presenting good exploration targets based on our knowledge from mapping and drilling in the neighboring mountains. The survey yielded at least 15 resistivity highs thought to represent rhyolite domes covered by alluvium.

In 2020 Allegiant performed detailed geologic mapping at the Western Anomaly (near the far northwest side of the Eastside claim block), a number of areas south (up to 2 km. south) of the main drilled Eastside area, and in the Boss/Castle area. Additional surface sampling was completed to confirm geochemical anomalies in earlier sampling campaigns.

In addition, two hundred new surface samples were taken. The results of this sampling confirmed and, in some cases extended the size of the geochemical anomalies. The results of this mapping and sampling prompted the increase of the existing 243ha (601 acre) operating plan to 3600 acres. The geochemical anomalies contained multiple samples with gold and arsenic values exceeding five times background.



#### 10.0 DRILLING (ITEM 10)

### **10.1 Summary of Eastside Area Drilling**

All of the drilling at the Eastside area of the project is attributed to Columbus prior to 2018 and afterward to Columbus' spinout Allegiant; no other drilling is known to have been done. The drilling targeting the Eastside resource area totals 49,393m in 168 holes exploration holes and one groundwater test hole. Additionally, drilling at the Target 5 area totaled 2,938m in 10 holes (ES-137 to ES-146). At Adularia Hill, 3,170m were drilled in 21 holes (ES-169 to ES-189). Drilling for the Eastside project is summarized in Table 10.1 and shown in Figure 10.1. All of the RC drilling was conducted by Boart Longyear. In 2018 and 2019, core drilling was conducted by Godbe Drilling of Montrose, Colorado. Approximately 86% of the meters drilled in the Eastside resource area were using RC methods; the remainder was core. Eight core holes were drilled entirely with wireline diamond-coring methods, and eight holes were started with RC drilling and completed with core drilling.

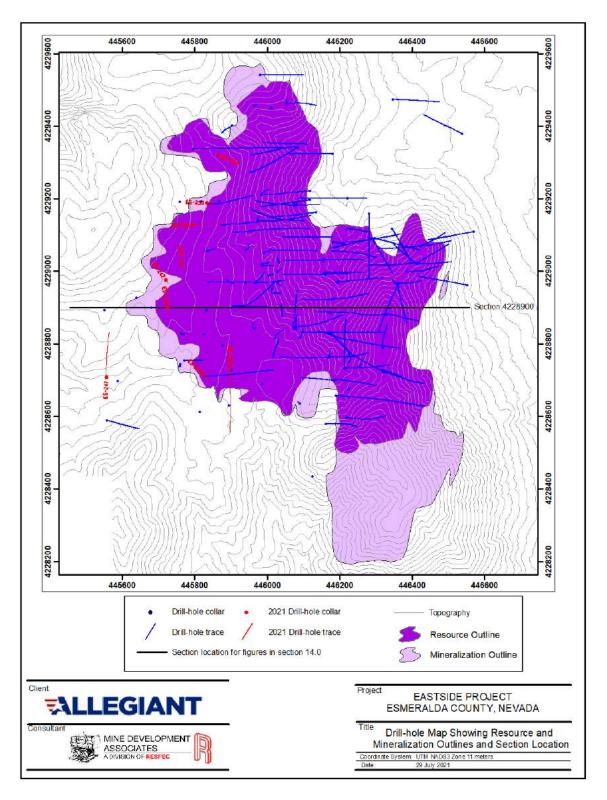
Total Project Area					
Hole Type	Number	Meters			
Core	16	6,951			
RC	183	42,442			
Total	199	49,393			
Resource Area					
Hole Type	Number	Meters			
Core	16	6,951			
RC	152	42,442			
Total	168	49,393			
Outside Resource Area*					
Туре	Number	Meters			
RC	31	6,126			
Surface Samples	1550	1,550			
Total	1581	7,676			

\*And outside Castle area

Drilling commenced in 2011 and continued in 2013, 2015, 2016, 2017, 2018, 2019 and 2021 as summarized in Table 10.2. All RC drilling was done during single 12hr shifts per day. Core drilling was done in two 12hr shifts, drilling 24hrs per day.

The RC rigs used 5.25in (13.3cm) diameter dual-wall pipe and 5.5in (14.0cm) bits with a conventional hammer and interchange. Samples were taken continuously over 5ft (1.52m) intervals and passed through a rotating wet splitter. Maximum per hole drilled depths ranged from 47.2m to 578m. Drilling was done dry for the first 15m or so, after which water was injected. Groundwater has not been encountered at Eastside, and water injection was, reportedly, kept to a minimum.









The core was HQ size (63.5mm diameter) except where drilling conditions required the stepdown to NQ (47.6 mm diameter) size. Drilling was done using circulation of water and drilling fluids. The deepest core hole reached a maximum down-hole depth of 577.9m. Drill holes were generally set up using a Trimble sub-meter GPS for orientation. Much less often, a Brunton was used to set up foresights for drill-hole azimuths.

Year	Туре	Holes	Meters	Drill Rig
2011	RC	12	2,148	MPD-1500 track-mounted
2013	RC	24	5 <i>,</i> 367	MPD-1500 track-mounted
2015	RC	52	12,464	MPD-1500 track-mounted
2016	RC	35	11,409	MPD-1500 track-mounted
2016	RC precollar/RC/Core	7	3,053	MPD-1500; LF-90 track-mounted
2016	Core	7	2,993	LF-90 track-mounted
2017	RC	10	2,938	MPD-1500 track-mounted
2018	RC precollar/RC/Core	22	8,265	MPD-1500 track-mounted; MaxiDrill 10
2019	RC	21	3,170	MPD-1500 track-mounted
2021	RC	<u>9</u>	<u>3,679</u>	RD-10 truck mounted
Totals		199	55,486	

# Table 10.2 Summary of Eastside Area Drilling by Year

*Note:* 2019 drilling occurred at Adularia Hill external to the current mineral resources.

### 10.2 Discussion of Eastside Area Drilling by Columbus and Allegiant

In early 2011 Cordex drilled 12 widely spaced RC holes to test beneath gold-bearing surface samples and mapped structural zones coincident with geophysical zones of high resistivity. Two drill holes failed to reach their targeted depths due to poor ground conditions. Four of the remaining 10 holes encountered gold mineralization within rhyolite and andesite, the most significant of which, ES-04, intersected 6.1m averaging 5.7g Au/t. This hole may be considered the discovery hole at Eastside.

A total of 24 RC holes totalling 5,367m were drilled in two phases by Cordex during 2013. The first phase was drilled in March through September 2013. The second phase of drilling took place in November and December 2013

In 2015 a total of 51 RC exploration holes were drilled in June through September. Most of these were inclined drill holes. One additional hole (WW-01) was drilled from a site about 2km east of the main drilling area as a groundwater availability test. The depth of this hole was 166.1m.

A total of 49 drill holes were completed in 2016, in a mixed RC and core program between February and August. This was the first core drilling on the property. Thirty-five of these holes were RC only; 14 holes were either partially or entirely drilled as core. Seven of the core holes had pre-collars drilled to depths ranging from 131.1 to 182.9m by RC and then casing was set before the resumption of drilling by the core rig. Many of the drill holes were inclined.



During March 2017, a total of 2,938m were drilled in 10 RC holes at Target 5, an area centered about 6.4km south of the area shown in Figure 10.1. The results were generally low grade, with anomalous gold-silver mineralization encountered in all holes. Due to the distance from the estimated resources, the Target 5 drilling has no impact on the estimated resources.

In 2018, after the transfer of Eastside ownership to Allegiant, a total of 22 holes totaling 8,265 meters were drilled around the Eastside resource area with the goal of expanding the resource. Twenty of the holes were drilled with RC, one hole was drilled with an RC pre-collar and finished with core (ES-163) and one hole was drilled entirely with core (ES-160). Results were positive, resulting in an expansion of the resource which is the subject of this report.

In 2019 Allegiant focused on drilling the Adularia Hill area, discussed in Section 10.8 of this report.

In 2021, Allegiant drilled nine holes totaling 3,679 meters mostly along the west side of the Eastside deposit. All of the holes were drilled with RC. Drilling and sampling procedures were similar to previous years' campaigns except that this year the rotating splitter had three exits for sample material, a huge improvement over the standard two-exit rotating splitters.

## **10.3** Geological Logging

During RC drilling, samples of each 1.52m interval drilled were washed in water and placed in prenumbered chip trays as drilling proceeded. The chips were subsequently logged with a binocular microscope by Cordex geologists. Logged data were recorded on paper forms and then electronically recorded during early years of drilling. That practice was modified, and more recently the data were entered directly into the computer, which then feeds into a GeoSequel database manager program. Logging recorded collar and drill-hole information, lithology, alteration, mineralization, vein details and an estimate of silica content. It is acknowledged that clay content will not be accurately recorded due to washing of the cuttings. Consistency of logging was maintained through use of a logging template utilizing a list of pre-determined codes. A summary, paper log sheet and a summary graphic down-hole plot were also prepared. The chip trays are stored at the Allegiant office in Tonopah.

The drillers filled out sampler logs. Data recorded on the forms include: hole name, depth, sample number, time, color, recovery, walls, wetness, hardness, and general remarks and comments.

Core logging and density measurements were done by Cordex geologists at a secure logging and storage facility in Tonopah. In addition to the density measurements done by Cordex, an independent geologist contracted through MDA made another 37 density measurements in 2021.

After cleaning, the core was photographed both dry and wet. A tripod was used to produce photos at a consistent scale. After being photographed, core recovery and rock quality designation ("RQD") measurements were made and recorded, and then the core was logged for lithology, alteration, structure, and mineralization. Graphic depictions of structures were also recorded. Logged information was recorded on paper log forms for subsequent capture into electronic spreadsheets and loading into the GeoSequel database manager.



### **10.4 Eastside Area Drill-Hole Collar Surveys**

Drill-hole collar locations were surveyed during the 2011 and 2013 programs using hand-held Garmin GPS units. These instruments are typically capable of determining positions to within less than 5m of their actual location.

All holes drilled during 2015, 2016, 2017, 2018 and 2019 were surveyed at completion to sub-meter accuracy, using TerraSync<sup>TM</sup> software and a Trimble GPS data collector, with Pathfinder Office® software used to apply post-collection processing for enhanced accuracy. All previously drilled holes whose collars could still be located on the ground were also re-surveyed using the Trimble system, but six of the first 36 holes could not be re-located.

In 2021, Allegiant used only a hand-held GPS for surveying collar coordinates, but they did so by taking up to five measurements per hole and averaging them for the final number.

#### **10.5 Eastside Area Down-Hole Surveys**

Beginning in 2015, surveys to measure down-hole deviation were performed in all holes for which it was possible by independent contractor International Directional Services ("IDS"), based in Battle Mountain, Elko, or Tonopah, NV. Surveys were made to as near the end of the hole as could be reasonably and safely done. Five holes were not surveyed down hole because they were either abandoned long before reaching the target depths or had unstable or blocked portions. None of the holes in Adularia Hill were down-hole surveyed.

#### **10.6 Summary Statement for Eastside Area Drilling**

The author believes that the drilling procedures described above provided samples that are representative of the material sampled and of sufficient quality for use in the resource estimations and Inferred classification discussed in Section 14.0. The author is aware of a possibility of down-hole contamination and the potential impact on the on the estimate is discussed in Section 14.0. MDA considered this and found that contamination would have been low-grade and impossible to identify, isolate and remove.

#### **10.7** Castle Area Drilling

Most of the drilling at Castle (Table 10.3) is historical, and records of that drilling in the Castle claims area are incomplete. Cordex geologists had compiled historical drill-hole information from paper maps and from GPS surveys of hole collars that were visible in 1998-1999. Cordex geologists believe that approximately 1,500 holes have been drilled within the Castle area claims, and that the majority were less than 100m in depth.

A map of the presently known locations of historical drill collars is shown in Figure 10.2. The author is not aware of much information rig types, sampling procedures, collar surveying and down-hole surveying used during the historical drilling. In 2021, MDA compiled all available drill data for Castle making a drill database that is described in (Table 10.3). Table 10.4 summarizes the history of drilling at Castle. Additional drill holes are known to exist from historical maps, but data for them have not been found.



In 2020 Allegiant drilled 49 RC holes for a total 6,146m. The rig was a Drill Systems MPD-1500 hired from Boart Longyear.

In addition to the drilling data, Allegiant took 65 surface samples around the Boss pit.

Castle Drilling Database			
Hole Type	Number	Meters	
RC	455	38,851	
Air track or rotary	49	1,575	
Total drilling	504	40,426	

\*additional drilling is known to exist but is not available

Castle Drilling History				
Hole Type / Year Drilled	Number	Meters		
Falcon Exploration / unknown	221	11,356		
Houston Oil and Minerals / 1979	49	1,575		
Amax / 1982	3	358		
Homestake / 1987	37	1,815		
Asarco / 1989	8	1,027		
Western Mining / 1992	22	2,833		
Kennecott / 1993, 1994, 1995	64	8,952		
Uranerz / 1998, 1999	21	2,131		
Cordex / 1998, 1999	30	4,233		
Allegiant / 2020	49	6,146		
Grand Total	504	40,426		

#### Table 10.4 Castle Area Drilling History

The author believes that down-hole contamination may have occurred at Castle and has treated the drill data accordingly by excluding samples from being used in estimation when potential contamination was suspect.

# 10.8 Adularia Hill Drilling 2019

A total of 3,170m were drilled in 21 RC holes in the Adularia Hill area in 2019. Nearly all the holes intersected hydrothermally altered rocks and intervals that contained gold in the range of 0.02g Au/t to 0.09g Au/t from top to bottom, irrespective of the lithology of the host rock. Eighteen of the 21 holes penetrated at least 1.52m with gold grades that exceeded 0.10g Au/t.



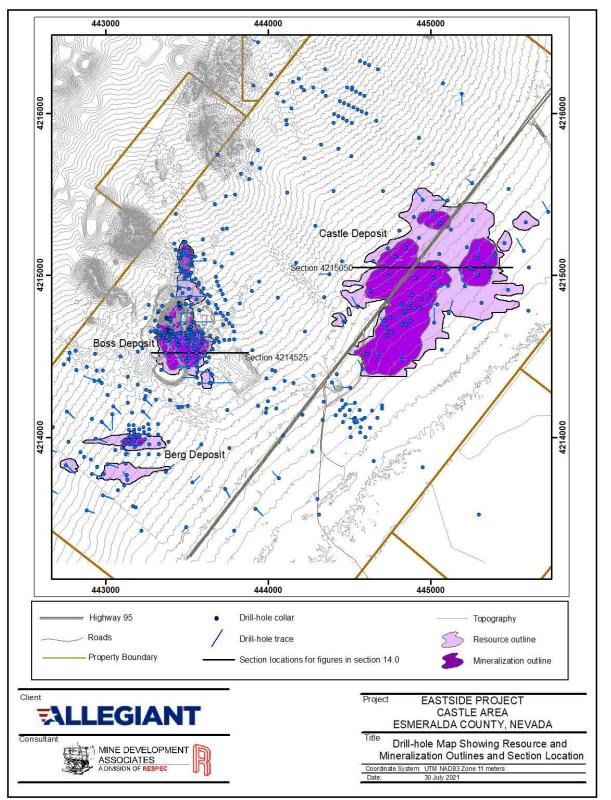


Figure 10.2 Map of Drill Holes Used in the Castle Resource Estimate



# 11.0 SAMPLE PREPARATION, ANALYSIS, AND SECURITY (ITEM 11)

### 11.1 Eastside Area Sample Preparation and Analysis

### 11.1.1 Surface Rock Chip Samples

**1999 – 2004:** The 184 surface rock chip samples collected by McIntosh in 1999 were assayed by Chemex in Sparks, Nevada, which was, and is, independent of Allegiant. MDA has no information on the sample preparation procedures or analytical methods used. MDA also has no information on the analytical laboratory, preparation and analytical methods used for the Newmont rock and soil samples analyzed before Newmont terminated their lease in 2004. Regardless, both sets of data are considered reliable.

**Cordex 2004 and 2009 – 2016:** Rock chip samples collected by Cordex during this period were analyzed at American Assay Laboratories ("AAL") in Sparks, Nevada, which was, and is, independent of Allegiant, and at ALS Chemex in Sparks, Nevada (Chemex was acquired by ALS in 2000), which became ALS at the end of 2008. ALS Chemex and ALS are both referred to as "ALS" and both were, and continue to be, independent of Allegiant and its predecessors.

The samples collected in 2004 were analyzed at AAL. Gold was analyzed by fire-assay fusion of a 30g aliquot using atomic adsorption ("AA") finish. Silver was determined by fire-assay fusion of a 30g aliquot using a gravimetric finish. Silver, gold and 34 major, minor and trace elements were also determined by inductively coupled, plasma atomic-emission spectrometry ("ICP") following aqua regia digestion of a 1g aliquot.

Rock-chip samples assayed at AAL during 2018 and 2019 were analyzed by the same methods described above. In some cases, samples were also assayed for gold using an ICP finish after a 30g fire-assay fusion. In other cases, samples were also assayed for silver using an AA finish following 30g fire-assay fusion. For some samples, silver was determined by ICP following aqua regia digestion of a 1g aliquot.

Gold in rock-chip samples was also analyzed at ALS in 2009, 2014, 2015, 2016 by fire-assay fusion of 30g aliquots, followed by an AA finish. Silver, gold and 49 other major, minor and trace elements were assayed in these samples by a combination of ICP and mass spectrometry ("ICP-MS") following aqua regia digestion of 1g aliquots. For some of the samples, silver was also analyzed by 30g fire-assay fusion followed by a gravimetric finish. In a few, but not statistically significant number of cases, gold was also determined by so-called "metallic-screen" fire assays.

AAL and ALS are both accredited under ISO/IEC 17025:2005.

### **11.1.2 RC Drilling Samples**

Although all the Columbus and Allegiant RC drilling at Eastside was above the water table, most of the RC drilling was done with water injection and the cuttings were split by a rotating wet splitter located beneath the cyclone. A little over half of the sample was collected directly into pre-labeled 51cm by 61cm bags held in 5gal (22.71) buckets placed directly below one of the two discharges of the rotating splitter.



A small proportion of the RC drilling was done dry. Dry sample splitting was done at the rig using a Jones-type splitter with adjustable slots, prior to placing the split sample into the pre-labeled bags. Difficult drilling conditions precluded more dry drilling.

Unless the RC samples had substantial water in them, the samples were brought to the project staging area and logging trailer located within ~1km of the drill sites. There they were air-dried on racks before being placed in transportation bins provided by the analytical laboratory. If the wet RC samples were full of water and bloated, the samples were left temporarily at the drill site to drain, before being brought to the drying racks at the staging area.

All of the RC samples from 2011 through 2021 were prepared and analyzed at AAL. After being received at the analytical laboratory, the RC samples were oven dried at  $\sim 100^{\circ}$ C, weighed, then jaw crushed in their entirety to 6 mesh size before being roll crushed to 100% passing 10 mesh. The -10 mesh material was riffle split to obtain an approximately 300g sub-sample, which was ring pulverized to 85% at less than 150 mesh size.

In 2011 through 2021 most all gold assays were fire assays with an AA finish. Prior to estimation of the 2016 resource block model, silver assays were initially done by two-acid digestion ICP with silver samples above 6.86g Ag/t checked with fire assay and a gravimetric finish. Subsequently, all drill samples lying within the gold domains and some samples extending outside the gold domains were re-assayed for silver with a lower detection limit and using four-acid digestion ICP. All post-2016 block model samples were analyzed by two-acid digestion ICP with the detection limits of 6.86 or 10g Ag/t; because the detection limits of these samples were so high, MDA changed them in the database used to estimate resources to unassayed ("-1"). In 2021, the detection limit for silver analyses was 10g Ag/t, and these too were changed to unassayed ("-1") because that grade is above the mean silver grade of the deposit.

### 11.1.3 Core Samples

After completion of logging, the core boxes were marked with metal tags and red felt-tip marker lines to show the beginning and ending of sample intervals. The core was marked longitudinally with a center line and perpendicular marks to show the diamond-saw operator where to cut the core. The sample intervals were then sawed in half, length wise. Half of the sawed core was placed in sample bags that were numbered as sample cutting proceeded. The other half was returned to the core boxes and stored for future reference.

All of the 2016 and 2018 core samples were prepared and analyzed at AAL. Preparation procedures, including crushing and pulverizing, were the same as those used for the RC samples, but without the oven drying step. The 2016 and 2018 core samples were analyzed using the same methods described above for the 2015 and 2016 RC samples.

# **11.2** Eastside Area Sample Security

Rock-chip samples were transported by Cordex staff from the project site and delivered to either ALS or AAL. Most of the RC drill samples were picked up at the project staging area by an AAL driver and delivery truck, and transported to the AAL facility in Sparks, Nevada. In some cases, RC samples were



transported from the staging area and delivered to AAL's facility in Sparks by Cordex personnel using Cordex vehicles.

Core samples were kept at the Cordex logging and core cutting facility in Tonopah until shortly before a sample pickup by AAL. The core samples were then transported to the project staging area by Cordex personnel and placed in bins, which were then transported to the AAL facility in Sparks by an AAL driver and delivery truck. In some cases, core samples were transported from the logging and cutting area and delivered to AAL's facility in Sparks by Cordex personnel using Cordex vehicles.

# 11.3 Eastside Area Quality Assurance/Quality Control

## 11.3.1 Eastside Surface Rock and Soil Samples

MDA has no information on Quality Assurance/Quality Control ("QA/QC") procedures that may have been used by McIntosh and Newmont for surface rock and soil samples analyzed during 1999 through 2004. Cordex did not use blanks or standards for external QA/QC control of rock-chip sample assays.

# 11.3.2 Preliminary Eastside QA/QC Work from 2015 Drilling

Six wet RC field-duplicate samples were sent in for metallic screen analysis. In all but one case of gold and one case of silver, the metallic-screen samples obtained higher grades. Because the samples were field-duplicate samples, one should not assume that standard assaying always reports low.

In addition, 50 duplicate-pulp samples were sent in to a second laboratory. The comparison between the two sets of data showed no material bias and not-unexpected differences between the original and second duplicate samples at around 10% for the difference from the mean of the pair (minimums) and about 20% for the difference from the smaller (maximum).

# 11.3.3 Entire Eastside Area Drill Program

In 2011 and 2013, Cordex utilized the assay laboratories' internal QA/QC standards, blanks, and duplicates for monitoring drill sample assays. Cordex also took RC field (rig) duplicate samples from the second discharge on the rotating splitter, which were used for second-lab check samples. Cordex implemented their own external QA/QC program for monitoring drill-sample assays in 2015 and 2016 by inserting commercial standard reference materials, blanks, and duplicates into the drill-sample stream prior to shipment of samples to the assay laboratory. Duplicate samples were not inserted into the sample stream for drilling done after November 2016, but standards and blanks were.

Blanks inserted by Cordex consisted of oxidized landscape rock (rhyolite) crushed to 0.95cm. Standards consisted of commercial standard reference materials purchased as pulps. For RC drilling, a blank or a standard was inserted at the drill rig at pre-determined random intervals about every 32 samples. The same procedure and rate of insertion was used for core drilling, except the standards and blanks were inserted following core sampling at the logging facility in Tonopah. A description of the standards and blanks inserted by Cordex is summarized in Table 11.1.



Standards and Blanks – 2011 to 2021				
Standard Name	Source	Description	Count	
CDN-ME-1101	CDN	Oxide Au 0.564 g/t	2	
CDN-ME-19	CDN	Oxide Au 0.620 g/t	2	
MEG-Au.11.29	MEG	Au 3.60 g/t	16	
OxC129	ROCKLABS	Oxide Au 0.205 g/t	52	
OxC145	ROCKLABS	Oxide Au 3.60 g/t	13	
OxD108	ROCKLABS	Oxide Au 0.414 g/t	125	
OxG104	ROCKLABS	Oxide Au 0.925 g/t	100	
OxG124	ROCKLABS	Oxide Au 0.918 g/t	8	
OxH122	ROCKLABS	Oxide Au 1.247 g/t	108	
OxJ120	ROCKLABS	Oxide Au 2.365 g/t	61	
OxH122	ROCKLABS	Oxide Ag 30.012 g/t	1	
SL77	ROCKLABS	Sulfide Au 5.181 g/t	31	
MEG-Au.11.29	MEG	Ag 13.4 g/t	74	
MEG-Au.12.25	MEG	Ag 4.4 g/t	58	
Cordex Blank	Landscape Rock	<10 ppb Au; pale-yellow rhyolite 3		

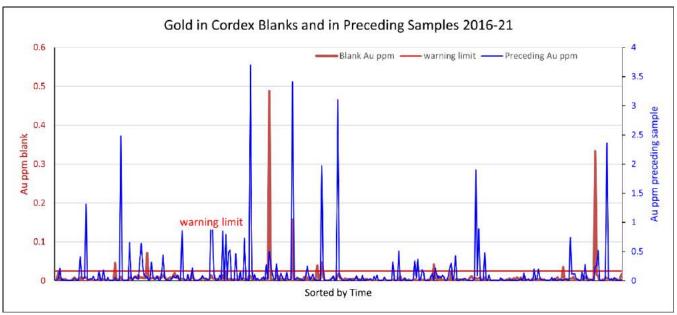
Table 11.2 summarizes all QA/QC samples from 2011 through 21 drilling, including all internal laboratory standards, blanks and duplicates. This does not include pulp-duplicate samples assayed at a second laboratory (Section 11.3.2). Assays pulps were not sent to a secondary laboratory for check assays in 2018 or 2019 or 2021.

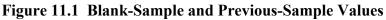
Cordex QA/QC					
Group	Au	Ag			
Standards	518	173			
Blanks	390	390			
Duplicates (Field and Pulp)	264	125			
All Cordex QA/QC Samples	1172	688			
Internal Lab QA/QC					
Group	Au	Ag			
Standards	1798	1631			
Blanks	895	1165			
Duplicates (Prep and Pulp)	6703	7520			
All Lab QA/QC Samples	9396	10316			

#### Table 11.2 Cordex QA/QC Samples



For all drilling, there were 1285 blanks inserted into the sample stream for gold analyses. Of those, 895 were lab blanks and 390 were coarse crushed rhyolite. Only nine of the Cordex-submitted 390 blanks had a gold value above 5 times detection limit and at least two of these may have been a mismarked standard or sample. One of these samples failed for both gold and silver. Of the lab-submitted blanks, there were only two failures.





# 11.3.4 Eastside Area Drill Samples – Standards

The following results on gold assays were obtained from the inserted CRM standards:

- OxC129: the 52 inserted standard-sample assays averaged 14% higher than the certified standard grade (0.205g Au/t). There were two failures at less than the certified standard grade minus three standard deviations, and one failure greater than the certified standard grade plus three standard deviations.
- OxD145: the average grade for the 13 inserted samples was slightly higher than the certified standard grade (0.212g Au/t). There were no failures below the certified standard grade minus three standard deviations and one failure greater than the certified standard grade plus three standard deviations.
- OxD108: the average grade for the 125 inserted samples was the same as the certified standard grade (0.414g Au/t). There were no failures below the certified standard grade minus three standard deviations and one failure greater than the certified standard grade plus three standard deviations.
- OxG104: the average grade for the 100 certified samples inserted into the sample stream was the same as the certified grade (0.925g Au/t). There were seven failures at less than the certified



standard grade minus three standard deviations, and four failures greater than the certified standard grade plus three standard deviations.

- OxG124: of the 8 certified samples inserted, the average grade was 27% lower than the certified standard grade (0.918 g Au/t). There were four failures at less than the certified standard grade minus three standard deviations, and none greater than the certified standard grade plus three standard deviations.
- OxH122: the average grade for the 108 certified samples inserted was the same as the certified standard grade (1.247 g Au/t). There were six failures at less than the certified standard grade minus three standard deviations, and one failure greater than the certified standard grade plus three standard deviations.
- OxJ120: of the 61 certified samples inserted, the average grade was 5% lower than the certified standard grade (2.365g Au/t). There were no failures at less than the certified standard grade minus three standard deviations, and none greater than the certified standard grade plus three standard deviations.
- SL77: the average for the 31 certified samples inserted was 3% lower than the certified standard grade (5.181g Au/t). There was one failure at less than the certified standard grade minus three standard deviations, and none above the certified standard grade plus three standard deviations.

The failure rate for certified gold standards is 5.6% when using the "industry-standard", albeit arbitrary definition for failures at greater than or less than the certified standard grade, plus or minus three standard deviations, respectively. Four percent were high failures, and 1.6% were low failures. One standard accounted for 22% of the failures. Results from all of the certified gold standards are around three percent lower grade than the certified grades of the standards.

The following results on silver assays were obtained from the inserted standards:

- MEG-Au.11.29: 74 samples were inserted. The average silver grade was 2% higher than the given standard grade (13.4g Ag/t). There were no standard deviation data available for this standard.
- MEG-Au.12.25: 58 samples were inserted. The average grade was 3% lower than the given standard grade (4.4g Ag/t). There were no standard deviation data available for this standard.
- SL77: 40 samples were inserted. The average grade was the same as the certified standard grade (29.1g Ag/t). There were no failures.

The failure rate for silver standards is 2.5% when using the "industry-standard", albeit arbitrary definition for failures at greater than or less than the certified standard grade, plus or minus three standard deviations, respectively, and all of those were high failures. The certified silver standard results are around a half percent high grade than certified value.

Charts for each of the standards were plotted showing the grade received for the standard, the mean, two and three-standard deviations from the mean. The failure rate is high, but many were most likely caused by sample mix-ups or mis-labeling, which is still a failure although not with the laboratory.



### 11.3.5 Eastside Area Drill Samples – Field Duplicates

There were 143 field-duplicate samples analyzed for gold through the end of the 2015 drilling which show a material low bias in the duplicate samples. The sample results in the database are biased high relative to the duplicates, and possibly by as much as 20% on average. Removing suspect duplicate samples from that data set reduces the low bias in the duplicate sample to 8%. Mr. Ristorcelli cannot state which is more correct given present information. The average absolute value of the relative differences is 123% for the maximum difference, and an average 22% for the difference from the means. These are not unexpected differences in field duplicate samples, but the bias is important.

There were 86 field duplicates for silver, and all are from drill holes prior to and including ES-039. Differences between duplicate and original silver grades are greater than for gold and the high bias for the original samples is greater. Furthermore, there are four samples with impossible differences in grade that probably result from mishandling of data or mislabeling of samples, which are still errors, but not errors in analytical work.

No field duplicate samples exist in the database for drilling done after 2006.

There were AAL laboratory-inserted pulp and preparation duplicates. For gold, there were 230 prep duplicates and 1,155 pulp duplicates analyzed by the laboratory. For silver, there was one less preparation duplicate and the same number of pulp duplicates. These data were plotted for the 2018-2021 drilling, and for gold at the lower grades an average absolute relative difference of less than 225% was observed, while the grades above 0.015g Au/t showed an average absolute relative difference of less than 50% for both the laboratory pulp and prep duplicates. No exclusions of outlier samples were needed for the laboratory duplicates. Evaluating the silver duplicates was complicated by the high detection limits (10 ppm), with only 13 of the 229 prep duplicate values and 35 of the 1155 pulp duplicate values being above detection limit. For these small number of samples, a low average absolute relative difference of less than 20% was observed across all grades.

### 11.4 Historical Castle Area Sample Preparation and Analysis

The author is not aware of information on the methods and procedures of sample preparation and analysis used during the various campaigns of historical drilling conducted in the Castle claims except for those conducted by Allegiant. The author is aware that all drilling done used RC methods and rotary or air track.

### 11.5 Allegiant Castle Area Sample Preparation and Analysis

### 11.5.1 Surface Rock Chip Samples

Allegiant took 65 surface rock-chip samples around the Boss Mine. These were random rock chip. The samples were sent to AAL for gold and silver analysis by fire assay along with 32 trace-elements by ICP.



### **11.5.2 RC Drilling Samples**

Allegiant drilling injected water or hit the water table, in some cases making huge volumes of water. The cuttings were split by a rotating wet splitter located beneath the drill rig's cyclone. A little over half of the sample was collected directly into pre-labeled 51cm by 61cm bags held in buckets placed directly below one of the two discharges of the rotating splitter.

The samples were air-dried at the drill site in transportation bins provided by the analytical laboratory.

All of Allegiant's RC samples, which were drilled in 2020, were prepared and analyzed at AAL in Sparks, Nevada. After being received at the analytical laboratory, the RC samples were oven dried at ~100°C, weighed, then jaw crushed in their entirety to 6 mesh before being roll crushed to 100% passing 10 mesh. The -10mesh material was riffle split to obtain an approximately 300g sub-sample, which was ring pulverized to 85% at less than 150 mesh.

Gold assays were fire assays with an AA finish. Silver assays were done by two-acid digestion then ICP analysis with a detection limit of 10g Ag/t.

#### 11.5.3 Core Samples

No core drilling has been done at Castle.

### 11.6 Castle Area Sample Security

Rock-chip samples were transported by Cordex staff from the project site and delivered to AAL in Sparks, Nevada. Most of the RC drill samples were picked up at the project staging area by an AAL driver and delivery truck, and transported to the AAL facility in Sparks, Nevada. In some cases, RC samples were transported from the staging area and delivered to AAL's facility by Allegiant personnel in Allegiant vehicles.

### 11.7 Castle Area Quality Assurance/Quality Control

#### 11.7.1 Castle Surface Rock

No QA/QC procedures were used during the surface sampling at Castle. However, the samples were only used to support the model or modify some domain boundaries. The surface rock-chip samples were not used in estimation.

### **11.7.2** Castle Historical Drilling

MDA knows of no QA/QC programs – no blank, standard or duplicate samples - aside from internal lab duplicates and blanks used in any of the historical or current drilling; except for Cordex in 1999, but those results were not available to the author.



## 11.7.3 Castle Drilling

Allegiant drilled a dry RC drill hole next to one that was drilled wet. Only 16 paired samples are in the data set to compare and of those only nine had mean (of the pair) grades greater than 0.1g Au/t. The dry hole was slightly lower grade by 4% for all samples and by 10% for those paired samples greater than 0.1g Au/t. The data set is too small to make a confident interpretation for behavior of wet RC samples from this analysis. The silver comparison was not done because no assays were received above the detection limit of 10g Ag/t.

Allegiant sent 19 duplicate pulp samples to ALS. Of those, 12 had mean (of the pair) grades greater than 0.1g Au/t. The duplicate samples were slightly lower grade by 5% for all holes and by 6% for those paired samples greater than 0.1g Au/t than the wet hole. It is imprudent to make any global interpretations from this analysis. The silver comparison was not done because no assays were received above the detection limit.

No other QA/QC data exist for the Allegiant drilling at Castle.

# 11.8 Summary Statement on Sample Preparation, Analysis and Security

## 11.8.1 Eastside

It is the author's opinion that the sample preparation, analyses and security procedures performed by Allegiant and Cordex were adequate for Inferred classification. Mr. Ristorcelli believes that the drilling procedures provided samples that are representative of the material sampled and of sufficient quality for use in classifying resources to Inferred category as discussed in Section 14.0. Low bias in the pre-2016 duplicate RC samples, compared to the originals, is larger and not completely offset by the low bias found in inserted standards (Section 11.3.5). An evaluation of the QA/QC results and some possible remediation of issues found should be done for upgrading classification to Measured or Indicated.

### 11.8.2 Castle

The historical drill data were compiled from a variety of sources of data, some original and some secondary sources. Two important factors allow the data to be used for an Inferred estimate: one is that each drill campaign's data and the reporting of the exploration corroborate each other and the author was particularly harsh on eliminating data from use in modeling and estimation (Section 14.3.8). Importantly, the recent drilling by Allegiant corroborates in a general sense the historical drilling. Allegiant's drilling has little QA/QC but the drilling is sufficient for Inferred classification.



# 12.0 DATA VERIFICATION (ITEM 12)

According to NI 43-101 Part 1.1: "data verification" means the process of confirming that data has been generated with proper procedures, has been accurately transcribed from the original source and is suitable to be used. There were no failures to conduct verification by the author. A limitation was that independent verification samples of the historical drilling mineralized material were not collected and analyzed because those drill samples were not available.

## 12.1 Site Visits

During visits to the Eastside project on March 16, 2016 and again on May 5 and 6, 2016 Mr. Ristorcelli conducted independent reviews of drill core and drilling procedures. Mr. Ristorcelli also reviewed corelogging and related procedures, exploration practices, and evaluated the project geology. In 2019 and 2021, Ristorcelli reviewed core photos of the 2018 and 2021 core drilling, respectively. Mr. Ristorcelli visited the Castle project after drilling was completed, and Eastside while drilling was ongoing on April 8, 2021.

## 12.2 Eastside Area Drilling Database Verification

Prior to 2021, MDA personnel under Mr. Ristorcelli's supervision verified the drilling database by comparing it to original data separately maintained by Cordex personnel. A number of minor differences were detected in the comparison of collar coordinates, and these were resolved on a case-by-case basis. In many cases Cordex re-surveyed the collar coordinates using a hand-held Trimble device, and either the original values were replaced or an averaged value was used. The audit found that Cordex converted the original coordinates from the NAD27 UTM projection to NAD83 with some errors made in the conversions. MDA personnel corrected those errors.

The original down-hole survey compilation in the above database was problematic. MDA personnel went back to the original survey data and re-built the down-hole survey compilation excluding down-hole surveys extrapolated beyond the bottom of the drill-hole total depths.

Assays in the MDA database were checked against certificates of assay received directly from the analytical laboratories using a sampling of 35 randomly selected certificates (approximately 10%). No discrepancies were found and no further checking was done on the assay data.

A series of tests was then run to identify improbable data values in the MDA database. Tests identified numerous data entry errors for core recovery and RQD, which were corrected by Cordex but not rechecked by MDA.

In 2021, MDA compiled all the 2021 drill data and appended it to the previous database in GeoSequel. Some additional checks were performed on the entire database.

# 12.3 Summary Statement for Eastside Area Data Verification

Mr. Ristorcelli believes that data verification done shows that the database is of sufficient quality to be used in resource estimation.



## 12.4 Castle Area Database Audit and Quality Assurance/Quality Control

### 12.5 Castle Area Drilling Database Verification

MDA was tasked with compiling and validating the database for the Castle project (comprising the Castle, Berg, Boss, and Black Rock areas). Drill data from these areas were compiled and evaluated from their source. All Cordex and Kennecott drill data (CAS-xx and CA-xx holes) were found in an older Paradox database. These data were imported into GeoSequel and validated from the original drill logs and certificates. All other holes (U-xx, W-xx, GBE-xx, H-xx, Falcon 1042 to 1745, and Mintek 2030 to 2082) had assays added from any paper certificates on file, and geology added manually from any found drill logs. All drill-hole collar coordinates were pulled from Cordex maps, whose coordinates were converted to UTM Z11 NAD 83 (2011) meters by MDA, although the vertical elevations were later draped to the topography. Later ES-xx holes drilled by Allegiant in 2020 were entered straight into the GeoSequel system by Cordex personnel and validated by MDA. Table 12.1 summarizes the historical drilling and state of the data as it exists.

#### 12.6 Summary Statement on Castle Area Data Verification

Mr. Ristorcelli found that the multiple drill campaigns at different times and by different operators corroborate each other sufficiently to use for defining Inferred resources, compensating for the incomplete supporting documentation.



Company	Year(s)	Hole Names	Count	Drill Logs	Certificates	Remarks
Houston Oil &	1979	H-01 to 53	+/-1000 (?)	No	No	Only 50 in the current database,
Minerals			(50 in DB)			with some missing depths and
						coordinates. Perhaps part of a
						regional program.
Amax	1985	A-1 to 3	3	No	No	Locations only.
Falcon	Prior to	1042 to 1745	176	No	No	Mentioned in report, no data.
Exploration	1982					
	1985		27	Yes	No	Assay summaries only.
	1986		?	Yes	No	Have logs for 27 holes: 1042 to
						1053 and 1441 to 1455 only.
	1988		194?	Yes	No	
	1989		38	Yes	No	Assay summaries only.
	1990		50	Summaries	No	Assay summaries only.
Asarco	1990	GBE-1 to 8	8	Summaries	Yes	Located off topo maps.
Homestake	1987	BR-001 to 037	35	No	No	Locations only.
Mintek	1988	2030 to 2082,	83	Yes	Yes	Two of these holes are the only
Resources –	through	2105, 2106				core holes (2080, 2082).
Westley	1990					
Exploration						
Western Mining	1992	W-001 to 023	23	Yes	Yes	Complete documentation.
	1999(?)	2101 to 2108	8(?)	Summaries	No	Assay summaries only.
Kennecott	1993	CAS-001 to	8	Yes	Yes	Complete documentation.
	1994	CAS-065	33	Yes	Yes	Complete documentation.
	1995		24	Yes	Yes	Complete documentation.
Uranerz	1998	UB-01 to 20	21	Yes	Yes	Complete documentation.
Cordex	1998	CA-066 to 094	14	Yes	Yes	Complete documentation.
	1999		16	Yes	Yes	Complete documentation.
Allegiant	2020	ES-190 to 238	49	Yes	Yes	Complete documentation.
(non-historic)						

Table 12.1 Summary of Castle Historical Drill Data



# **13.0 MINERAL PROCESSING AND METALLURGICAL TESTING (ITEM 13)**

### 13.1 Eastside Area

Three preliminary metallurgical studies of mineralized material from the Eastside gold-silver deposit have been conducted beginning in 2014 and continued in 2016. No testing was done after 2016. Kappes, Cassiday and Associates, in Reno, Nevada ("KCA") was contracted to perform cyanide-leach bottle-roll tests on RC drill cuttings. A total of 92 cyanide-leach bottle-roll tests were completed on 54 samples by KCA during these three preliminary studies. The duration of each of the bottle-roll tests was 96 hours and the results were compiled and evaluated in three reports by KCA as follows:

- Cordex Project, Report of Metallurgical Test Work, KCA0140067\_CDX03\_01, June 2014 (KCA, 2014).
- Cordex Project, Bottle Roll Leach Tests on Previously Crushed Material, Report of Metallurgical Test Work, KCA0160090\_CDX04\_01, August 2016 (KCA, 2016a).
- Cordex Project, Compilation of All Bottle Roll Leach Tests on RC Cuttings, Report of Metallurgical Test Work, KCA0160102\_CDX06\_02, September 2016, (KCA, 2016b).

All three of the above studies were conducted and reported using Imperial units of measurement. To preserve the continuity of information, the original Imperial units are reported below.

### 13.2 2014 Cyanide-Leach Bottle-Roll Tests

The June 2014 work was performed on 14 separate drill samples with each sample being split and tested both "as is" (drill samples as produced from the drill hole) and also after grinding to 80% passing 200 mesh ("mill grind"). A total of 28 cyanide-leach bottle-roll tests were performed. The drill samples were selected to represent different grades, different amounts of oxidation, different alteration types, and different lithologies within the deposit. These first tests indicated Eastside mineralization was amenable to extraction with cyanide, irrespective of oxidation state (i.e., oxide and sulfide material leach equally well). However, gold and silver recoveries were dependent on particle size, with finer material yielding better recoveries. Gold extractions on "as is" drill cuttings ranged from 20% to 85% compared to KCA's calculated head grade. Silver extractions on "as is" material ranged from 6% to 52% and averaged 18%, compared to KCA's calculated head grades.

Gold extractions from mill grind material ranged from 85% to 97%. Silver extractions on mill grind material ranged from 27% to 71%.

### 13.3 2016 Cyanide-Leach Bottle-Roll Tests

The two sets of KCA testing done in 2016 reported on bottle-roll tests performed on sample reject material from 40 separate drill samples. These samples tended to be lower in overall grade than those tested in 2014, ranging from 0.13g Au/t to 1.9g Au/t. These samples had been lightly crushed to about 8 to 10 mesh, prior to assaying and the subsequent bottle-roll tests. All 40 of these samples yielded gold extractions ranging from 39% to 96%, and silver extractions ranging from 4% to 52%, compared to KCA's calculated head grades. Enough material remained to test 24 of the 40 samples at the mill grind size of



80% passing 200 mesh. The gold extractions at mill grind ranged from 71% to 99%. The silver extractions at mill grind ranged from 5% to 93%.

All of the KCA test work showed low cyanide consumptions, averaging about 0.1 to 0.15lb of cyanide consumed per ton of ore processed. Lime consumptions varied. Oxide samples consumed about 1lb per ton and sulfide samples about 2-3lb per ton. These results are preliminary and more test work is recommended.

# 13.4 Discussion of Metallurgical Testing Results from Eastside

Metallurgical work to date is not sufficient to accurately predict mill and heap-leach recoveries of gold and silver at Eastside, but it is sufficient for the current Inferred resource classification. Gold extractions in some of the KCA bottle-roll tests were still increasing at the end of 96 hours, whereas commercial heap-leach processing typically goes on for longer periods.

In addition, the KCA gold and silver recoveries summarized above were calculated based on the KCA calculated head assays. Calculated head assays were determined by assaying the amount of gold and silver recovered in the bottle-roll tests and adding it to an assay of the residue left over from leaching. Review of the testing to date shows the calculated head assays of the metallurgical samples differ from head assays determined from the original assay results of the same samples after drilling, and they also differ from the duplicate head assays determined by KCA prior to the bottle-roll leaching. The discrepancies are more pronounced in determining the head assay for silver. These issues need to be resolved with further testing but the current level of testing is sufficient for determining amenability to extraction by cyanide for an Inferred resource.

Although the Eastside metallurgical test data are preliminary and limited, they can be used for a preliminary determination of the suitability of the material for cyanide extraction. Consultations with metallurgists experienced in gold and silver heap-leach and milling operations have supported MDA's choice of about 70% recovery of gold from heap leaching of Eastside materials using three-stage crushing prior to leaching. Mill recovery for gold could be over 90% (the author used 93% in their determination of *"reasonable prospects for eventual economic extraction"*).

Much more testing is necessary to confidently predict silver recovery. The bottle-roll tests indicate recoveries of silver will be much less than for gold, likely in the range of 15% to 22% for heap leaching with a three-stage crush, and 40% to 55% from material treated at a mill grind. The author used 20% for heap leaching and 50% for mill recoveries in their determination of "*reasonable prospects for eventual economic extraction*".

Although the author is not expert with respect to metallurgy, the author has reviewed the metallurgical test studies and consulted with metallurgical experts. The author considers the information to be appropriate for the purposes for which it has been used in this report. The data from these studies are used in this Technical Report for the purposes of deriving reasonable and appropriate cutoffs for mineral resource reporting and determination of "*reasonable prospects for eventual economic extraction*."



# 13.5 Castle Area

Little information is available regarding metallurgical testwork or actual recoveries from production at the Boss Mine. The majority of the few data that do exist indicate that metallurgical recoveries by cyanide leaching will be achievable. Essentially all the mineralization is oxidized based on logged geologic data in the Castle database.

The following presents the cryptic and small amount of information that exists.

While Bowden (1998) mentions that Houston Oil and Minerals was disappointed in 1978 in the small size of the Boss mine, and their inability to get the ore to leach, Bowden also mentions that Falcon Exploration and Mintek reported production from the Boss mine averaged about 85-90% recovery from their stated grade of 0.06oz Au/ton. Bowden further mentioned that Kennecott did one set of cold-cyanide shaker tests on samples from CAS-30 from 215ft to 375ft (presumed to be 32-5ft samples). The fire assays averaged 0.040oz Au/ton and the cyanide assays averaged 0.038oz Au/ton for recovery of 95%.

Greybeck (1999) discusses the results of 114 samples submitted for "cold cyanide AA's" analyses and reported that "average recoveries in samples with >0.005oz Au/ton are indicated to be approximately 63%." Another historical report states that most "... ore intervals are oxidized ..." and goes on to say that "... preliminary metallurgy demonstrates 94% recovery based on -200 mesh, cold-cyanide tests." (anonymous, but likely from Bowden, 1978)



# 14.0 MINERAL RESOURCE ESTIMATES (ITEM 14)

## 14.1 Introduction

The effective date of the Eastside area mineral resource estimate is July 18, 2021. The effective date of the Castle area mineral resource estimate is May 21, 2021. Mr. Ristorcelli classifies resources in order of increasing geological and quantitative confidence into Inferred, Indicated, and Measured categories to be in compliance with the "CIM Definition Standards - For Mineral Resources and Mineral Reserves" (2014) and therefore Canadian National Instrument 43-101. CIM mineral resource definitions are given below, with CIM's explanatory material 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 cut-off, 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.

The author reports resources at cutoffs that are reasonable for deposits of this nature given anticipated mining methods and plant processing costs, while also considering economic conditions, because of the regulatory requirements that a resource exists "*in such form and quantity and of such a grade or quality that it has reasonable prospects for eventual economic extraction.*" Although the author is not an expert with respect to any of the following aspects of the project, Mr. Ristorcelli is not aware of any unusual environmental, permitting, legal, title, taxation, socio-economic, marketing, or political factors that may materially affect the Eastside mineral resources as of the date of this report.

## 14.2 Eastside Area

## 14.2.1 Eastside Area Database

The Eastside area drilling database contains 37,816 records from the 198 exploration drill holes, one water-well hole and surface sampling. Of these records, 36,923 have gold assays and silver assays (Table 14.1) of which 14,163 have silver assays with a sufficiently low detection limit to be useful. Other elements were analyzed early in the exploration drilling at Eastside, but that practice was halted after drill hole ES-036. The database also contains logged lithology, sample recovery, redox, and density measurements. All of this drilling data were used in the estimate, but only the survey and analytical data



were audited. The surface samples were used for modeling domain extensions at the surface but were not used in estimation.

	Count	Median	Mean	Std Dev	CV	Min	Max	Units
From	37,816					0.00	586.74	m
То	37,816					0.76	587.66	m
Length	37,816					0.15	16.76	m
Au	36,923	0.022	0.133	0.907	6.826	0.00	83.90	g/t
Ag	36,923	3.43	3.67	7.49	2.04	0.01	253.130	g/t
As	4,210	49	115	539	4.70	1.00	20000	ppm
Cu	4,210	12	14	11	0.74	1.00	152	ppm
Hg	4,210	1	1	1	1.18	0.01	29	ppm
Мо	4,210	4	14	73	5.32	0.20	2688	ppm
Pb	4,210	9	10	8	0.77	0.70	279	ppm
Sb	4,210	4	8	17	2.03	0.20	361	ppm
Zn	4,210	11	23	34	1.45	1.00	801	ppm
Notes to Tab	le· *CV is co	efficient of va	ariation or th	e standard d	eviation / m	ean: this tabl	e includes all s	amples

 Table 14.1 Eastside Exploration and Resource Database: Descriptive Statistics

Notes to Table: \*CV is coefficient of variation or the standard deviation / mean; this table includes all samples including surface rock chips

## 14.2.2 Eastside Geologic Model

The Eastside area geology was initially interpreted by Cordex on east-west cross sections spaced 40m apart. The limits of oxidized rocks were interpreted on the same cross sections. The interpretations were modified several times by both Cordex and Ristorcelli, and the final geologic and oxidation models were used for resource modeling and estimation (see Figure 7.4). The following units were defined and interpreted on the cross sections: Plz: Paleozoic rocks; Tbja: Blair Junction andesite; Tm: McLeans sedimentary rocks; Tga: Gilbert Andesite; Trt: rhyolite tuff; Talr: acid-leached rhyolite; Trd: dacite; Tr: rhyolite; Tvit: vitrophyre; Qal: alluvium.

# 14.2.3 Eastside Mineral Domains

Using the geologic model as a control, gold and silver domains were interpreted based on drill-sample grades and guided by geology on the same Cordex 40m-spaced sections. The domains were defined by subtle population breaks for gold and very strong population breaks for silver on cumulative probability plots ("CPP") of each metal. The majority of mineralization lies within the rhyolite, often with the better grades along external and internal rhyolite margins, but there are other subtler features within the rhyolite not presently understood that likely also control mineralization.

Two gold domains were defined, one  $>\sim 0.04$ g Au/t and one  $>\sim 0.3$ g Au/t. One silver domain was defined at  $>\sim 3$ g Ag/t (Figure 14.1 and Figure 14.2, respectively). The low-grade gold domain is a halo of disseminated mineralization largely inside and to a lesser extent around the rhyolite as large irregular shapes mimicking the rhyolite geometry. The domains can extend outside of the rhyolite into andesite



units. The higher-grade gold domain is much smaller and forms more linear zones, but also parallel to rhyolite boundaries. There are indications that higher-grade domains within the rhyolite may also be related to internal rhyolite intrusive contacts. While this is geologically reasonable, and in some areas the domains have been modeled that way, those shapes are in some instances somewhat speculative and geologically inferred.

Silver mineralization is volumetrically smaller than the gold and for the most part lies within the lowgrade gold halo but does not necessarily correlate with the gold locally. For those samples with high detection limits, domaining rules were necessarily different to constrain the estimate because of the analytical biases instilled in the data set with such high-detection limits. The single silver domain is bimodal, but the higher grades representing about 20% of the population appear discontinuous. This higher-grade subset was treated differently during estimation rather than by explicit modeling.

Gold and silver assays from surface rock samples were used to guide the interpretation of the gold and silver domains, controlling the projection of domains to the surface. However, assays from surface rock samples were not used in the estimation of block grades in the resource block model.

The domains on 40m-spaced sections were snapped to drill holes in three-dimensional space. Those sections where then taken to plan, one for each 6m block model level.



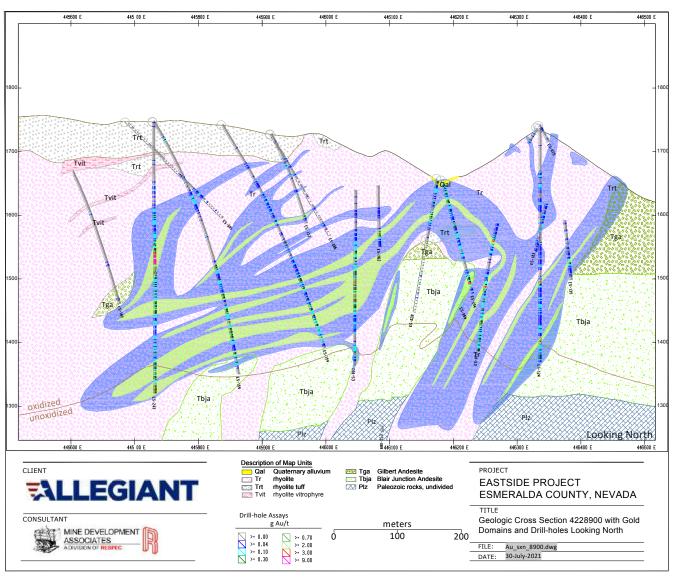


Figure 14.1 Gold Domains and Geology – Eastside Section 4228900N



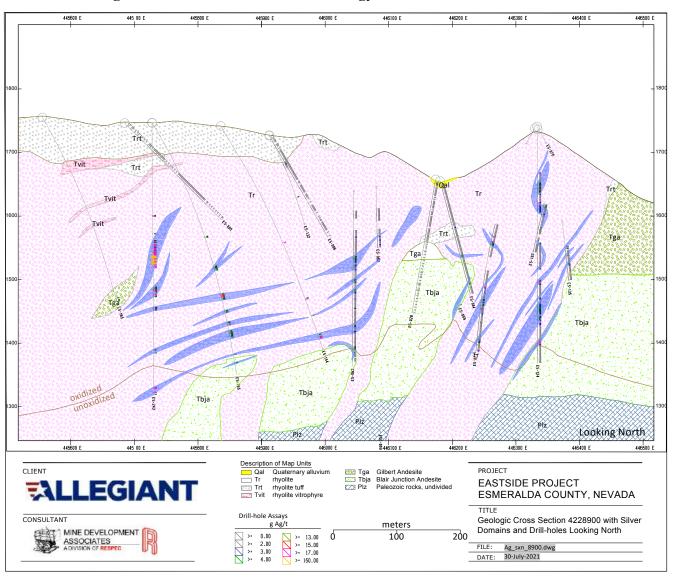


Figure 14.2 Silver Domains and Geology – Eastside Section 4228900N



#### 14.2.4 Eastside Area Density

Columbus measured rock densities using 203 samples of diamond drill core. Both the immersion and volumetric methods were used.

The volumetric method was used during the logging process and before core was sawed for assay. Geologists marked out roughly 15cm lengths of representative core selecting competent sections that form perfect cylinders when cut perpendicular to the long axis. After heating the sample for 30min at 93°C to dry, the dimensions of the cut ~15cm cylinders were measured with high-precision calipers, which measured to hundredths of millimeters. Diameters of core were measured three times and averaged, and then lengths were measured twice and averaged. These average values were used to calculate the volume of the sample. With a weighing scale accurate to a tenth of a gram, the sample was weighed. The sample weight was divided by the sample volume to obtain the density value.

Additional samples were measured by the immersion method. Geologists measured the density of previously cut and sampled core using the water-displacement method. A dry core sample was weighed with the same scale. The sample was then wrapped in cellophane and weighed while immersed in a 2,000ml graduated cylinder.

In 2021, an additional 37 samples were measured and another 14 values were found in the Allegiant archives and added to the database.

Table 14.2 summarizes the density measurements and the values coded to the resource block model ("Assigned density"), and descriptive statistics of the measurements by rock type. A seemingly high value of 2.20g/cm3 was assigned to Tm because the "average" was based on only one sample and that value is suspiciously low.

Lithology	Plz	Tbja	Tm	Tga	Trt	Talr	Trd	Tr	Tvit	Qal	Unassigned
Assigned density g/cm <sup>3</sup>	2.60	2.42	2.20	2.20	2.15	2.20	2.40	2.35	2.40	1.80	2.20
Difference	2.4%	0.8%	16.4%	NA	3.4%	0.0%	-1.2%	1.3%	3.0%	NA	NA
Average g/cm <sup>3</sup>	2.58	2.40	1.89	NA	2.08	2.21	2.43	2.38	2.33	NA	NA
Valid samples	3	41	1	NA	18	4	1	130	5	NA	NA
Plz: Paleozoic rocks; Tbja: Blair Junction andesite; Tm: Mcleans sedimentary rocks; Tga: Gilbert Andesite; Trt: rhyolite tuff; Talr: altered rhyolite;											
Trd: dacite; Tr: rhyolite; Tvit:	vitorophy	re; Qal: a	lluvium								

Table 14.2 Density Measurements and Va	lues Applied to the Eastside Area Block Model
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## 14.2.5 Eastside Composites

Once the gold and silver domains were defined and interpreted on the east-west cross sections, the domains were used to code drill-hole samples. Cumulative probability plots were made of the coded assays. Outlier grades were reviewed on screen and descriptive statistics were calculated (Table 14.3). Samples were capped from within each of the two gold domains and within the silver domain, as well as for assays outside modeled mineral domains. As noted earlier, the silver domain is bimodal, but the continuity that would allow for modeling of a higher-grade domain was not evident. As a consequence, and to compensate for the relatively high variability, the projection distance of higher silver grades in and outside all the domains were restricted during the estimation process.



	Valid	Median	Mean	Std. Dev.	Co. of Var.	Min.	Max.	Units
			Low-grade	gold domain				
Au	9,384	0.085	0.138	0.212	1.53	0.002	7.07	g/t
Au Capped	9,384	0.085	0.137	0.198	1.44	0.002	3.00	g/t
		I	High-grade	gold domain				
Au	2,318	0.516	1.218	3.348	2.75	0.01	83.90	g/t
Au Capped	2,318	0.515	1.102	1.908	1.73	0.01	15.00	g/t
			Outside g	old domains				
Au	23,673	0.011	0.023	0.079	3.38	0.00	5.21	g/t
Au Capped	23,673	0.011	0.022	0.050	2.21	0.00	1.00	g/t
			Silver do	main				
Ag*	3,728	5.00	11.06	21.30	1.93	0.10	253.1	g/t
Ag Capped*	3,554	5.30	11.09	19.00	1.71	0.10	150.0	g/t
		Ou	itside silve	r domain				
Ag*	33,195	3.43	2.84	1.98	0.70	0.01	100.0	g/t
Ag Capped*	10,609	0.70	0.97	0.99	1.02	0.01	5.0	g/t

\*Note: assays with high detection limits (6.86 and 10g Ag/t) were excluding from the capped field, compositing and estimation, which would did affect the statistics

Capping for each domain was determined by first assessing the grade above which the outliers occur. Then those outlier grades were reviewed on screen to determine materiality, grade and proximity of the closest samples, and general location. Caps of 3.0g Au/t, 15.0g Au/t, 1.0g Au/t, 150.0g Ag/t, and 5.0g Ag/t were applied for low-grade gold, high-grade gold, outside gold, inside silver, and outside silver domains, respectively. In total, 14 samples were capped in the low-grade gold domain, 17 samples were capped in the high-grade gold domain and 23 samples in the silver domain were capped. Once the capping was completed, the drill holes were down-hole composited to 3m intervals, honoring the domain boundaries. The descriptive statistics of the composite database are given in Table 14.4.



				Std.							
	Valid	Median	Mean	Devn.	Co. of Var.	Minimum	Maximum	Units			
Low-grade gold domain											
Au	5,066	0.095	0.136	0.157	1.2	0.004	2.856	g/t			
Au Capped	5,066	0.095	0.136	0.155	1.1	0.004	2.508	g/t			
			High	-grade gold o	lomain						
Au	1,308	0.573	1.189	2.515	2.1	0.008	41.040	g/t			
Au Capped	1,308	0.573	1.078	1.555	1.4	0.008	15.000	g/t			
			Ou	tside gold do	main						
Au	12,775	0.012	0.023	0.054	2.4	0.002	2.600	g/t			
Au Capped	12,775	0.012	0.022	0.040	1.8	0.002	0.958	g/t			
				Silver doma	in						
Ag	2,010	5.631	11.211	19.594	1.7	0.100	205.290	g/t			
Ag Capped	2,010	5.660	10.981	17.282	1.6	0.100	148.320	g/t			
	Outside silver domain										
Ag	5,437	0.86	1.15	1.98	1.7	0.1	72.8	g/t			
Ag Capped	5,437	0.82	1.02	0.91	0.9	0.1	5.0	g/t			

<b>Table 14.4</b>	Descriptive	<b>Statistics</b>	of Coded	Composites
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Correlograms were built for gold and for silver, and both showed good structure. Gold correlogram nuggets were 60% of the sill and total ranges were >60m to 100m with the longer ranges in the horizontal and north-south orientations. The bulk of the sills, however, were at ranges between 20m and 45m. Silver correlogram nuggets were 40% of the sill and total ranges were generally <100m. The bulk of the sills, however, were at around 30 to 50m.

#### 14.2.6 Estimation of Eastside Resources

Four estimates were completed: polygonal, nearest neighbor, inverse distance to the third power (" $ID^{3}$ "), and kriged. These estimates were run several times in order to evaluate the results and determine sensitivity to estimation parameters. The  $ID^{3}$  estimate is the reported estimate. The block model was broken down into five estimation areas to control the orientation of the search and anisotropy in estimation (Table 14.5).

Area	Rotation	Dip	Plunge
Area 1	270	-65	0
Area 2	0	0	0
Area 3	270	-90	0
Area 4	90	-45	0
Area 5	270	-40	0

Table 14.5	Estimation	Areas
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Two successive estimation passes were run for the low- and high-grade domains; a first long pass projecting 250m to 300m along the primary axes was used to fill in all blocks, followed by a short pass of 80m in both low- and high-grade domains. Range restrictions for the higher grades were applied (in the second and shorter estimation pass) because of the inability to determine and model continuity of those higher grades. All estimates and estimation runs were weighted anisotropically. Estimation passes; only drill sample assays were used for estimation.

The block model is not rotated, and the blocks are 6m north-south by 6m vertical by 6m east-west. The dimensions were chosen to best reflect possible block sizes for open-pit mining.

# 14.2.7 Eastside Area Mineral Resources

The author classified the Eastside resources giving consideration to the confidence in the underlying database, sample integrity, analytical precision/reliability, and geologic interpretations but mostly the understanding and ability to confidently project the high-grade zones. The work done is of sufficiently good quality to allow for higher classification, however, all material in this estimate is classified as Inferred due to the complex geology and, although to a lesser extent, some unexplained biases in field (rig) duplicate samples from the pre-2015 RC drilling. It is expected that a majority of these Inferred resources would be upgraded to Indicated or even Measured resources with continued exploration drilling.

The largest impediment to a classification of Indicated was the subtle, and therefore unknown controls on higher-grade mineralization. Presently the author assumes that the controls are dominantly internal structures in the rhyolite, and possibly lithologic and structural controls in the andesite rocks. It would be possible to classify some material as Indicated where the drill spacing is relatively close to compensate for the lack of detailed understanding of controls on mineralization.



Description	Parameter
Low-grade Gold Domain	<u>.</u> 1
Samples: minimum/maximum/maximum per hole	1 / 12 / 3
Rotation/Dip/Tilt (variogram and searches):	varies by estimation area
Search (m): major/semimajor/minor (vertical) Long Pass Estimation Area 1 Short Pass Estimation Area 1 Long Pass Estimation Area 2,3,4,5 Short Pass Estimation Area 2,3,4,5	300 / 300 / 75 80 / 80/ 20 250 / 250 / 62.5 80 / 80/ 20
Inverse distance power	3
High-grade restrictions (grade in g/t and distance in m) Long Pass Short Pass	none 1.0 / 60
High-grade Gold Domair	1
Samples: minimum/maximum/maximum per hole	1 / 12 / 3
Rotation/Dip/Tilt (variogram and searches):	varies by estimation area
Search (m): major/semimajor/minor (vertical) Long Pass Short Pass	250 / 250 / 62.5 80 / 80/ 20
Inverse distance power	3
High-grade restrictions (grade in g/t and distance in m) Long Pass Short Pass	none 1.0 / 60
Outside Gold Domains	
Samples: minimum/maximum/maximum per hole	2 / 12 / 3
Rotation/Dip/Tilt (variogram and searches):	varies by estimation area
Search (m): major/semimajor/minor (vertical)	250 / 250 / 62.5
Inverse distance power	3
High-grade restrictions (grade in g/t and distance in m)	0.08 / 12
Low-grade Silver Domain	
Samples: minimum/maximum/maximum per hole	1 / 12 / 3
Rotation/Dip/Tilt (variogram and searches):	varies by estimation area
Search (m): major/semimajor/minor (vertical) Long Pass Short Pass	250 / 250 / 62.5 100 / 100/ 20
Inverse distance power	3
High-grade restrictions (grade in g/t and distance in m) Long Pass Short Pass	none 20 / 60
Outside Silver Domains	1
Samples: minimum/maximum/maximum per hole	2 / 12 / 3
Rotation/Dip/Tilt (variogram and searches):	varies by estimation area
Search (m): major/semimajor/minor (vertical) Long Pass Short Pass	wherever Au was estimated 200 / 200 / 50
Inverse distance power	3
High-grade restrictions (grade in g/t and distance in m)	2 / 30

#### **Table 14.6 Estimation Parameters**



Table 14.7 presents the estimate of all the Inferred resources at Eastside. The author has used his judgment with respect to the technical and economic factors likely to influence the "prospects for eventual economic extraction" and believe that all cutoffs listed below could eventually be a basis for economic extraction of the resource. Those technical factors include anticipated metallurgical recoveries, current operating costs for anticipated mining and processing, and metal prices that have been seen in recent times. These mineral resources are not mineral reserves and do not have demonstrated economic viability. These are reported at a cutoff of 0.15g Au/t, calculated and supported by costs existing today for envisioned open-pit heapleach scenarios. To determine the "reasonable prospects for eventual economic extraction" a series of optimized pits were run using variable gold and silver prices, mining costs, processing costs, and anticipated metallurgical recoveries (see Section 13.0). These are reported at a cutoff of 0.15g Au/t which approximates anticipated economic cutoffs based on preliminary metallurgical test work and operations cost estimates for an envisioned open-pit with combined heap-leach and milling scenario. The author chose to report the resource considering mining costs of \$1.65 per tonne and G&A costs of \$1.50 per tonne, respectively. Heap-leach and milling costs used were \$3.50 per tonne and \$10.00 per tonne, respectively. The price of gold and silver were \$1,750 and \$21.88 per ounce, respectively. The price of gold and silver were around \$1,825 and \$25.5 per ounce, respectively at the time of completion of this report.

Cutoff	Tonnes	Grade	Ounces	Grade	Ounces
g Au/t		g Au/t	Au	g Ag/t	Ag
0.10	91,160,000	0.41	1,200,000	3.6	10,600,000
0.11	83,970,000	0.44	1,190,000	3.8	10,300,000
0.12	77,530,000	0.47	1,170,000	3.9	9,700,000
0.13	71,300,000	0.50	1,150,000	4.1	9,400,000
0.14	66,230,000	0.53	1,130,000	4.2	8,900,000
0.15	61,730,000	0.55	1,090,000	4.4	8,700,000
0.16	57,530,000	0.58	1,070,000	4.6	8,500,000
0.17	53,840,000	0.61	1,060,000	4.7	8,100,000
0.18	50,630,000	0.64	1,040,000	4.9	8,000,000
0.19	47,990,000	0.66	1,020,000	5.0	7,700,000
0.20	45,710,000	0.69	1,010,000	5.1	7,500,000
0.25	37,590,000	0.79	950,000	5.7	6,900,000
0.30	32,200,000	0.87	900,000	6.2	6,400,000
0.35	28,400,000	0.95	870,000	6.6	6,000,000
0.40	25,320,000	1.02	830,000	7.0	5,700,000
0.50	20,130,000	1.16	750,000	7.7	5,000,000

# Table 14.7 Eastside Inferred Gold Resources

Cross sections of the gold and silver block models are given in Figure 14.3 and Figure 14.4.



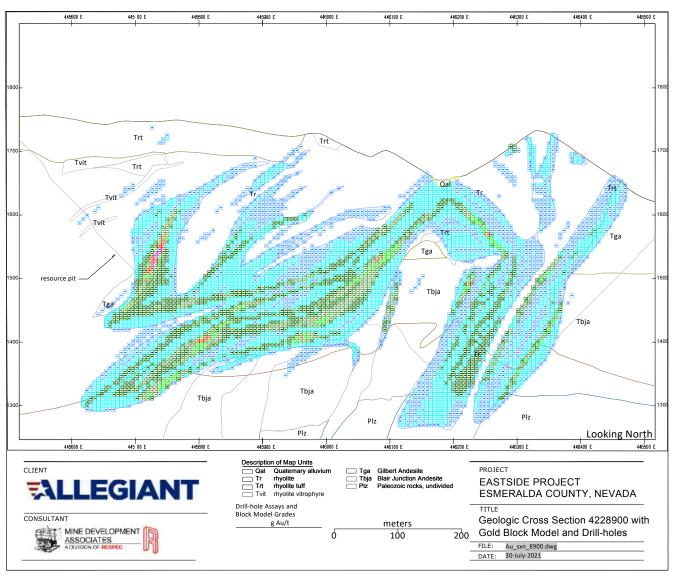
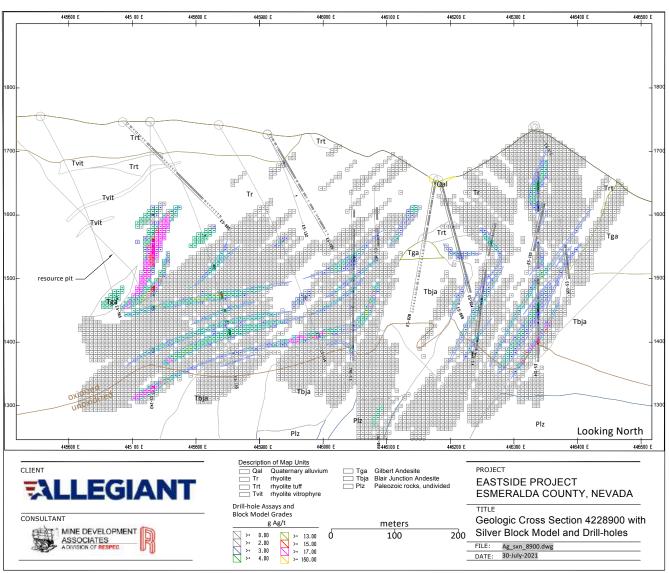


Figure 14.3 Gold Block Model, Eastside Section 4228900N









## 14.2.8 Discussion of Eastside Area Resources

This updated resource estimate for Eastside has defined a dominantly rhyolite-hosted, epithermal, lowsulfidation, almost entirely oxidized, precious-metal deposit extending almost a kilometer and a half in a north-south direction. The deposit as presently defined is almost 700m wide (east-west) and almost 500m in vertical extent. The deposit remains open to the south, west and at depth.

The deposit shows significant vertical zonation with the better grades below about 1,700m asl. The complicated geometries are presently difficult to confidently project and are likely due to multiple controls on mineralization. These controls are in part due to the host rhyolite plugs with variable and complex internal structures. The gold mineralization extends outside of the rhyolite into andesite units where about 15% of the mineralized material occurs. Just under 80% of the mineralization is oxidized, though there is no relationship yet determined between oxidation and cyanide recovery.

The principal reason that the resources have been classified as Inferred is due to the inability to confidently project and model the high-grade zones because of the previously mentioned subtle and unknown controls on mineralization. Identifying and defining high-grade continuity is particularly important in light of the 2021 drill intersection in ES-243 (see Figure 14.1) consisting of 25.84m grading 12.75g Au/t (capped to 15g Au/t the grade is 7.42g Au/t) along with 130.9g Ag/t (capped to 150g Ag/t the grade is 106.1g Ag/t).

A significant outcome of the work by Cordex and Allegiant has been the development of a good geologic model, which provided the basis of the current resource estimate and, just as importantly, can be used to guide future drilling at Eastside, and elsewhere in the Eastside area.

All of the Eastside resources are classified as Inferred. It is expected that a majority of these Inferred resources would be upgraded to Indicated resources with continued exploration drilling. The work, sampling, data and geologic interpretations are sufficiently accurate to increase the classification to Indicated, with the exception of the silver assays obtained after November 2016, which have an insufficiently low detection limit.

The identification and recognition of controls of mineralization. This is in part because much of the drilling is by RC methods, and the siting and type(s) of occurrence of the gold and silver are not well understood. Substantial drilling is required for verification of continuity of the highest-grade assays. On the positive side, the work done has shown a strong and very large system remaining open in three directions and with substantial potential to increase in size.

Metallurgical test work conducted to date is preliminary but is sufficiently consistent that the expectations are that the gold and silver will be recovered by cyanide leaching, though silver recoveries are low. A relationship of recovery and geology has not yet been determined.

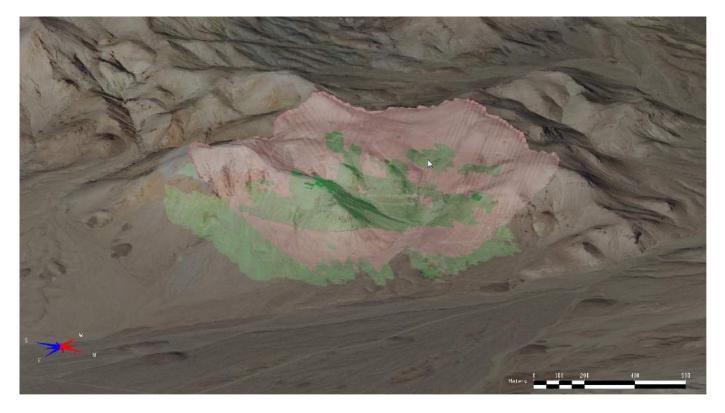
Many iterations were made at first defining the geology and later interpreting the gold and silver domains. Mr. Ristorcelli worked closely with the Cordex geologists while making these interpretations. The understanding of the deposit increased, but out of necessity the model is a bit conceptual in several areas where geologically sound interpretations were made to portray inferred geologic controls on mineralization.



MDA personnel ran a series of optimized pits using variable gold and silver prices, mining costs, processing costs and processing scenarios. It should be noted that most scenarios showed consistent increases of about a percent in contained mineralized material up to a gold price \$2350/oz and silver price of \$29.38/oz where there is a 7% jump in contained gold ounces. It is important to note that mineralization continues below and beyond the reporting-pit limits (Figure 14.5).

#### Figure 14.5 Estimated Mineralization at 0.15g Au/t and the Resource Pit

(green is the mineralization estimated above 0.15g Au/t; pinkish is the resource constraining pit; looking 240° at -21°)





## 14.3 Castle Area

## 14.3.1 Castle Area Database

The Castle area drilling database contains 12,554 sample records from 569 exploration drill holes. Of these records, 11,402 have gold assays and 10,467 have silver assays (Table 14.8). Forty-nine of the holes were drilled by Allegiant in 2020 (Table 10.3). The database contains logged lithology, formation, redox, clay percent, silicification, silica type, vein silica, vein style, fracture intensity, oxidation and iron oxide in variable amounts depending on the drill campaign. All of this drilling data were used in the estimate and 65 surface samples were used in modeling.

	All Data										
	Count	Median	Mean	Std Dev	CV	Min	Max	Units			
From	12,554					0.0	271.3	m			
То	12,554					1.0	274.3	m			
Length	12,554					0.9	178.3	m			
Au	11,402	0.029	0.114	0.382	3.334	0.001	17.88	g/t			
Ag	10,467	1.3	2.5	2.9	1.1	0.1	91.6	g/t			
As	186	289	893	1756	2	25	12830	ppm			
Sb	186	14	32.5	41	1.3	1	216	ppm			
Hg	186	24	253.5	713	2.8	2	6900	ppm			
Lithology	12,554										
Formation	8,934										
Clay	5,827		8.0			0	100	%			
Vein silica	5,866		1.0			0	90	%			
Sulfide	4,012		0.4			0	10	%			
Carbonate	5,872		0.2			0	85	%			
Vein carbonate	5,849		0.1			0	55	%			

 Table 14.8 Castle Exploration and Resource Database: Descriptive Statistics

## 14.3.2 Castle Geologic Model

The Castle area geologic model was based on geologic logging in the database as well as historical geologic interpretations. The limits of oxidized rocks were not interpreted as oxidization is pervasive in the volcanic rocks in the mineralized volumes. The following units were defined and interpreted on the cross sections: Paleozoic rocks, Tertiary andesite and rhyolite, and gravel (also referred to as alluvium).

Paleozoic rocks form the basement at the project. Rolling paleo-topography of the Paleozoic rocks makes it difficult to define fault offsets. This unit is a very clear and easy to recognize even in RC cuttings. The Paleozoic basement rocks are exposed east and north of the drilled area and in one knob adjacent to the highway. These rocks are chert, siliceous argillite, siltstone, fine-grained quartzite, and lesser limestone. Due to the nature of these host rocks, the lack of core, and high water flows no resources were estimated or defined in the basement.



Tertiary volcanic and associated volcanic-sedimentary rocks are the host rocks for the mineralization included in the resource estimate. These rocks also crop out east of the drilled area and in the Boss pit. For this study, the volcanic rocks were divided into two major units: rhyolite and andesite. Likely, these major groups could be sub-grouped into ash-flow tuff, andesite flows, tuff, dacite flows, intrusive rocks, lake sediments, and a series of rhyolite domes, and basaltic lava flows, and that could help refine the domain model and understanding of the controls of mineralization.

The above-bedrock Tertiary units are covered almost everywhere by gravel, which reaches up to 100m thick along the eastern margin and to the east the Castle deposit. The gravel is thinnest to absent in the western part of the Castle area and deepens to the east.

Figure 14.6 and Figure 14.7 show the geology of the deposit area in cross section.

# 14.3.3 Castle Mineral Domains

Using the geologic model as a guide, gold domains were interpreted based on drill-sample grades on the same 25m-spaced sections on which the geologic model was interpreted. The domains were defined by subtle population breaks for gold on cumulative probability plots of each metal. The domain geometries were guided by the geology. The majority of mineralization lies within the andesite. While mineralization was encountered in the Paleozoic rock during drilling, the lack of understanding of geologic controls and the combination of high to extremely high water flows in drilling, that mineralization can only be considered potential and not part of a classified resource.

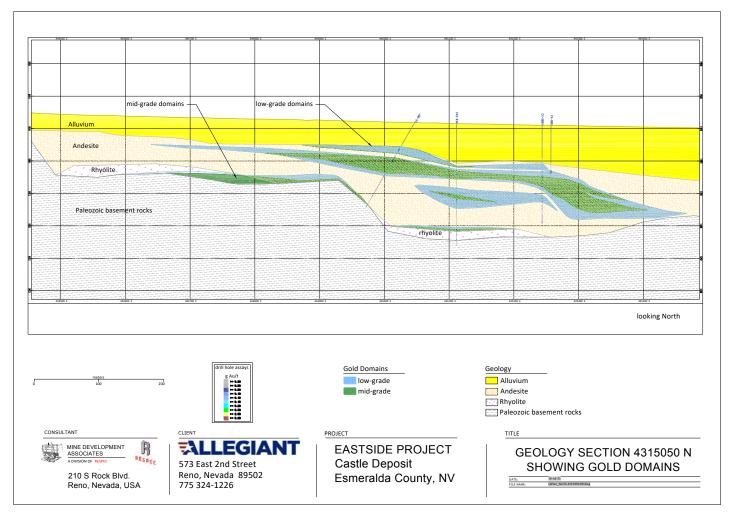
Two gold domains were defined, a halo around  $>\sim 0.08$ g Au/t and one  $>\sim 0.3$ g Au/t. (Figure 14.6 and Figure 14.7). The gold domains define disseminated mineralization (there is no core to properly describe the style of mineralization) largely within the andesite as horizontal tabular shapes. Section 7.3.1 presents a general description. The domains can extend into the rhyolite but by far the dominant host rock is andesite. There are indications that higher-grade domains include some vertical controls. It is impossible to define any vertical controls of mineralization or even small barren zones with the mineralized area because of the lack of core, so all mineralization is defined as Inferred at this time.

Gold assays from surface rock samples were used to guide the interpretation of the gold domains, controlling the projection of domains near the surface. However, assays from surface rock samples were not used in the estimation of block grades in the resource block model.

Silver could not be modeled as 35% of all samples were at a detection limit of 5g Ag/t.

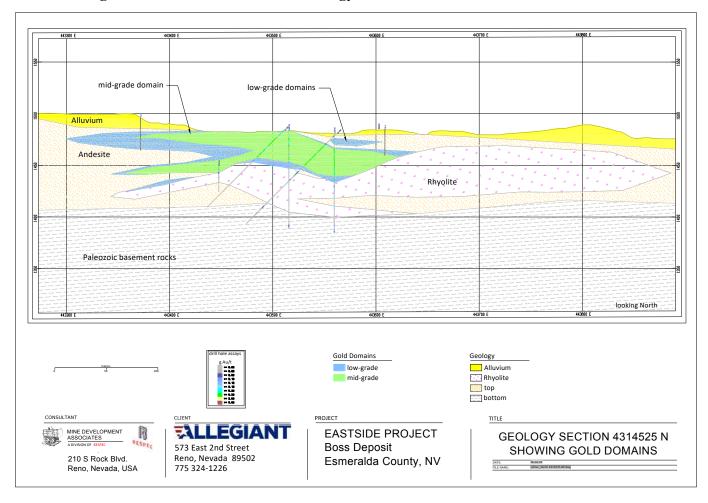
The domains on 25m-spaced sections were snapped to drill holes in three-dimensional space. Those sections where then taken to long section, one for each 6m block column.





#### Figure 14.6 Gold Domains and Geology – Castle Area Section North 4215050N







## 14.3.4 Castle Area Density

There are no density measurements from rock at Castle. Consequently, density values assigned to the model rock units were derived from similar units at Eastside. Table 14.9 summarizes the density values coded to the resource block model.

Table 14.9	Density	y Measurements and	Values Annli	ed to the C	astle Area Blo	ck Model
	Density	y micasul chiches and	i vanues rippi	cu to the Ca	asuc mea Dio	ch mouci

Lithology	Paleozoic rocks	Andesite	Rhyolite	Gravel
g/cm <sup>3</sup>	2.6	2.4	2.4	1.8



## 14.3.5 Castle Composites

Once the gold and silver domains were defined and interpreted on the east-west cross sections, the domains were used to code drill-hole samples. Cumulative probability plots were made of the coded assays. While there are substantial sample intervals in the Paleozoic basement with gold grades, none of these were used in the estimate nor were they modeled (see Section 14.3.3).

Outlier grades were reviewed on screen and descriptive statistics were calculated (Table 14.10). Samples were capped from within each of the two gold domains, as well as for assays outside modeled mineral domains. The silver domain is bimodal, but the continuity that would allow for modeling of a higher-grade domain was not evident. As a consequence, and to compensate for the relatively high variability, the projection distances of higher grades in and outside all the domains were restricted during the estimation process.

	Count	Median	Mean	Std Dev	CV	Min	Max	Units
	Low-grade gold halo							
Au	1,072	0.123	0.148	0.144	1.0	0.007	2.90	g/t
Au Capped	1,072	0.123	0.147	0.130	0.9	0.007	2.00	g/t
Ag	978	1.3	2.6	3.2	1.2	0.1	51	g/t
	Gold domain							
Au	1,067	0.382	0.654	0.877	1.3	0.013	8.57	g/t
Au Capped	1,067	0.382	0.651	0.849	1.3	0.013	7.00	g/t
Ag	1,018	3.7	3.7	4.2	1.1	0.1	64	g/t
	Outside of gold domains							
Au	5,565	0.018	0.039	0.103	2.7	0.001	4.60	g/t
Au Capped	5,565	0.018	0.038	0.079	2.1	0.001	2.00	g/t
Ag	4,851	0.6	2.1	2.8	1.3	0.1	92	g/t

# Table 14.10 Descriptive Statistics of Coded Samples at Castle

(samples from volcanic rocks only; no basement or gravel samples)

Capping levels for each domain were determined by first assessing the grade above which the outliers occur. Then those outlier grades were reviewed on screen to determine materiality, grade and proximity of the closest samples, and general location. Caps of 2.0g Au/t, 7.0g Au/t, and 2.0g Au/t were applied for the low-grade halo, main gold domain, and outside the gold domains, respectively. In total, one sample was capped in the low-grade halo domain, three samples were capped in the high-grade gold domain and three samples outside the domains. Once the capping was completed, the drill holes were down-hole composited to 3m lengths, honoring the domain boundaries. The descriptive statistics of the composite database are given in Table 14.11.



	Count	Median	Mean	Std Dev	CV	Min	Max	Units
	Low-grade gold halo							
Au	704	0.130	0.148	0.108	0.7	0.015	1.58	g/t
Au Capped	704	0.130	0.147	0.098	0.7	0.015	1.12	g/t
Gold domain								
Au	648	0.419	0.654	0.782	1.2	0.020	7.97	g/t
Au Capped	648	0.419	0.650	0.757	1.2	0.020	6.92	g/t
Outside of gold domains								
Au	3,174	0.020	0.039	0.084	2.2	0.001	2.75	g/t
Au Capped	3,174	0.020	0.038	0.064	1.7	0.001	1.59	g/t

Correlograms were built for gold and those showed poor structure and no to very short ranges.

#### 14.3.6 Estimation of Castle Resources

Four estimates were completed: polygonal, nearest neighbor, inverse distance to the third power ("ID<sup>3</sup>"), and kriged. These estimates were run several times in order to evaluate the results and determine sensitivity to estimation parameters. The ID<sup>3</sup> estimate is the reported estimate.

The estimate was done in one pass for each of the low-grade halo, the main gold domains and outside the domains. Range restrictions for the higher grades were only applied to the grades outside the gold domains because of the presumed lack of continuity. Estimation parameters are given in Table 14.12. Assays from surface rock samples were not used in the estimation passes; only drill sample assays were used for estimation. No estimation was made nor resources tabulated in the basement Paleozoic rocks. While the search of 230m is long, only 5% of all blocks were estimated from samples farther than 100m.

The block model is not rotated, and the blocks are 6m north-south by 3m vertical by 6m east-west. The dimensions were chosen to best reflect potential block sizes for open-pit mining.



Description	Parameter					
Low-grade Gold Domain						
Samples: minimum/maximum/maximum per hole	1 / 12 / 3					
Rotation/Dip/Tilt (variogram and searches):	120° / -4°					
Search (m): major/semimajor/minor (vertical)	230 / 230 / 57.5					
Inverse distance power	3					
High-grade restrictions (grade in g/t and distance in m)	none					
High-grade Gold Domain						
Samples: minimum/maximum/maximum per hole	1 / 12 / 3					
Rotation/Dip/Tilt (variogram and searches):	120° / -4°					
Search (m): major/semimajor/minor (vertical)	230 / 230 / 57.5					
Inverse distance power	3					
High-grade restrictions (grade in g/t and distance in m)	none					
Outside Gold Domains						
Samples: minimum/maximum/maximum per hole	2 / 12 / 3					
Rotation/Dip/Tilt (variogram and searches):	120° / -4°					
Search (m): major/semimajor/minor (vertical)	60 / 60 / 15					
Inverse distance power	3					
High-grade restrictions (grade in g/t and distance in m)	0.1/6					

## 14.3.7 Castle Area Mineral Resources

The estimated resources are based on an open pit mining and heap leach extraction scenario. The author classified the Castle resources giving consideration to the confidence in the underlying database, sample integrity, analytical precision/reliability, and geologic interpretations. The database, which is almost entirely built from historical exploration files should only support Inferred resources at the present time. Allegiant's drilling represents 3% of all drill holes and 4% of all drilled meterage. It is expected that a majority of these Inferred resources would be upgraded to Indicated resources with exploration drilling, and in fact, there is empirical evidence that more mineralization will be found.

The largest impediment to a classification of Indicated is the database as just mentioned. But the drilling at Castle also encountered "*adverse*" and "*high volumes*" of water, according to historical reports, which leads to potential downhole contamination. MDA excluded all mineralization outside of the domains (in volcanic and Paleozoic rocks) from the resources, and modified the domains excluding those intervals deemed potentially contaminated. Another complication is the lack of understanding for local controls of the mineralization. While there is high confidence in overall shape of mineralization, there is less confidence that we know, and therefore and can properly account for, the controls of higher-grade zones within the main gold domain. Core drilling is critical to get a better understanding of controls of mineralization. Having core may also allow for estimating and defining resources in the basement rocks.

The author has used his judgment with respect to the technical and economic factors likely to influence the "prospects for eventual economic extraction" and believes that all cutoff grades listed below could



eventually be a basis for economic extraction of the resource. Those technical factors include anticipated metallurgical recoveries, current operating costs for anticipated mining and processing, and metal prices that have been seen in recent times. These mineral resources are not mineral reserves and do not have demonstrated economic viability. These resources are reported at a cutoff of 0.15g Au/t, calculated and supported by costs existing today for envisioned open-pit heap-leach scenarios. Table 14.13 presents the estimate of all the Inferred resources at Castle. Table 14.14, Table 14.15 and Table 14.16 present the estimates of each of the sub-areas: Boss, Berg and Castle, respectively.

Entire Model - Inferred							
Cutoff	Tonnes	g Au/t	Ounces Au				
0.10	24,410,000	0.42	332,000				
0.14	20,866,000	0.47	319,000				
0.15	19,986,000	0.49	314,000				
0.16	19,211,000	0.50	311,000				
0.17	18,559,000	0.51	307,000				
0.18	18,017,000	0.53	304,000				
0.19	17,503,000	0.54	301,000				
0.20	16,946,000	0.55	298,000				
0.25	14,589,000	0.60	281,000				
0.30	12,852,000	0.64	265,000				
0.40	9,580,000	0.74	229,000				
0.50	6,720,000	0.87	188,000				

#### Table 14.13 Entire Castle Project Inferred Gold Resources

**Table 14.14 Boss Area Inferred Gold Resources** 

Boss - Inferred						
Cutoff	Tonnes	g Au/t	Ounces Au			
0.10	3,437,000	0.32	36,000			
0.14	2,886,000	0.36	34,000			
0.15	2,700,000	0.38	33,000			
0.16	2,584,000	0.39	32,000			
0.17	2,479,000	0.40	32,000			
0.18	2,394,000	0.40	31,000			
0.19	2,307,000	0.41	31,000			
0.20	2,224,000	0.42	30,000			
0.25	1,879,000	0.46	28,000			
0.30	1,555,000	0.49	25,000			
0.40	1,006,000	0.57	19,000			
0.50	595,000	0.66	13,000			



Berg - Inferred						
Cutoff	Tonnes	g Au/t	Ounces Au			
0.10	367,000	0.36	4,000			
0.14	334,000	0.39	4,000			
0.15	322,000	0.40	4,000			
0.16	311,000	0.40	4,000			
0.17	298,000	0.41	4,000			
0.18	286,000	0.42	4,000			
0.19	270,000	0.44	4,000			
0.20	255,000	0.45	4,000			
0.25	210,000	0.50	3,000			
0.30	193,000	0.52	3,000			
0.40	145,000	0.59	3,000			
0.50	80,000	0.67	2,000			

#### **Table 14.15 Berg Area Inferred Gold Resources**

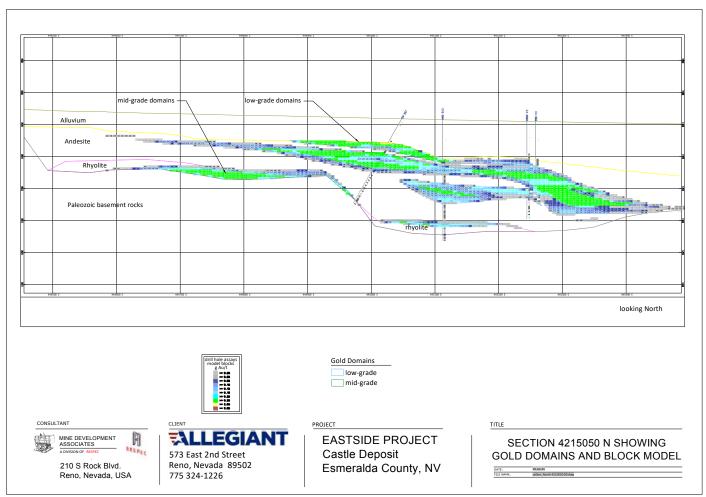
#### Table 14.16 Castle Area Inferred Gold Resources

Castle - Inferred							
Cutoff	Tonnes	g Au/t	Ounces Au				
0.10	20,607,000	0.44	292,000				
0.14	17,646,000	0.50	281,000				
0.15	16,965,000	0.51	278,000				
0.16	16,317,000	0.52	275,000				
0.17	15,782,000	0.54	272,000				
0.18	15,338,000	0.55	269,000				
0.19	14,926,000	0.56	267,000				
0.20	14,468,000	0.57	264,000				
0.25	12,499,000	0.62	250,000				
0.30	11,105,000	0.67	237,000				
0.40	8,429,000	0.77	207,000				
0.50	6,045,000	0.89	173,000				

To determine the "*reasonable prospects for eventual economic extraction*" the author ran a series of optimized pits using variable gold prices, mining costs, processing costs, and anticipated metallurgical recoveries, which currently are based on the fact that some heap-leaching has been done. These are reported at a cutoff of 0.15g Au/t which approximates anticipated economic cutoffs based on operating-cost estimates for an envisioned open-pit heap-leach scenario. The author chose to report the resource considering mining costs of \$1.65 per tonne and G&A costs of \$1.50 per tonne, respectively. Heap-leach costs used were \$3.50 per tonne and recoveries were assumed to be 75%. The price of gold used for the resource pit optimization was \$1,750/oz. The price of gold and silver were around \$1,825 and \$25.5 per ounce, respectively at the time of completion of this report.



Cross sections of the gold and silver block models are given in Figure 14.8 and Figure 14.9, respectively.



# Figure 14.8 Gold Block Model Section 4215050N



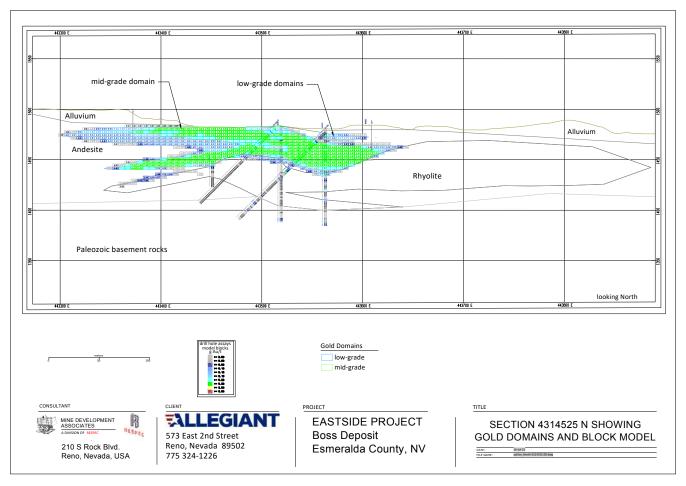


Figure 14.9 Gold Block Model, Boss Section 4214525N



## 14.3.8 Discussion of Castle Area Resources

The resources at Castle have historically been considered small pods of mineralization, when in fact, all sub-areas are very similar, and at low (subeconomic) grades are one single deposit with separate highergrade areas. The predictability of the main gold domain is impressive adding much confidence to the deposit in spite of the Inferred classification. The Inferred classification is not because of continuity of mineralization.

Rather, there are two reasons for the low classification at Castle: historical data and high water flows. The historical data were derived from multiple sources, some not original, however, those data do present a good perspective of mineralization at Castle. By explicitly working with the data on section-after-section and from hole-to-hole one gets a good appreciation of mineralization and reasonableness of the data. This sense of confidence is somewhat negated by the combination of low-grades and apparently indistinct domain boundaries. With all the water encountered while drilling, described in historical reports as "*adverse*" and "*high volumes*", one must assume that some smearing and down-hole contamination has occurred thereby "blurring" the contacts.

There is strong evidence for horizontal tabular zones of mineralization. Similar geometry appears from section-to-section and throughout all historically defined sub-areas: Boss, Berg, Black Rock, and Castle. With all of the RC drilling and lack of core drilling, explicit controls on mineralization can only be speculated. Historical descriptions of the mineralization controls have ranged from "*rheologically favorable unit in the andesite*", therefore sub-horizontal and tabular, to a "*myriad of steeply dipping mineralized zones*". Allegiant suggests, based on surface and pit mapping and logging cuttings that three types of mineralization exist, none of which necessarily contradict the overall tabular bodies defined in this study:

- In andesite tuff around andesite domes and intrusive plugs;
- Fractures in older andesite, more structurally controlled;
- Quartz veinlets in clay-altered rock with limonite.

The evidence for tabular mineralized bodies is compelling, but there is evidence in the field of some vertical component to the mineralization, such as vertical-dipping veins and veinlets, some of which do not carry gold mineralization. Because volcanic rock stratigraphy is inherently complicated and volcanic domes are known to exist, complications within and of tabular bodies of mineralization are certain to exist. "Hilly" paleo-topography makes defining fault offsets speculative at the current drill spacing.

Future drilling, particularly with core will ultimately lead to better understanding of the mineralization and higher classification. The mineralization is open in several directions, so additional resources will be found. The certainty in that statement is justified because there are areas that have been drilled on closely spaced centers for which only hole locations and depths are known (Figure 10.2). It is highly unlikely that close-spaced drilling would have been conducted without encountering gold mineralization. No mineralization nor resources are defined in those areas.

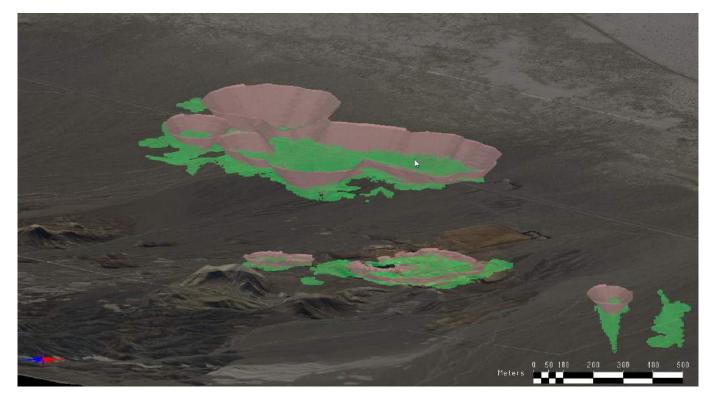
Because of the lack of understanding of the controls of mineralization in the Paleozoic bedrock, no resources were defined within it. The author won't speculate if there will or will not be real mineralization or classified resources to be found in the Paleozoic bedrock, but drilling has produced gold-bearing samples in the basement. Three areas exist where core drilling into the Paleozoic bedrock is justified.



MDA ran a series of optimized pits using variable gold prices, mining costs, and processing costs. It should be noted that most scenarios showed consistent increases of about a percent in contained mineralized material up to a gold price \$2350/oz. It is important to note that mineralization continues below and beyond the reporting-pit limits (Figure 14.10).

Figure 14.10 Estimated Castle Mineralization at 0.15g Au/t and the Resource Pit

(green is the mineralization estimated above 0.15g Au/t; pinkish is the resource-constraining pit; looking 90° at -18°)



The Castle deposit in part underlies Highway 95. Pit optimizations show that the deposit meets *"reasonable prospects for eventual economic extraction"* both without the effect of the highway and also using it as a constraint. Future economic studies must account for the cost of moving the highway to get access to the entire resource. Consequently, the estimated resource is not and should not be reduced to account for the highway at the current time.



# **15.0 MINERAL RESERVE ESTIMATES**

There are no estimated mineral reserves at this time.



# **16.0 MINING METHODS**

This section is not applicable to the Eastside and Castle gold and silver property.



# **17.0 RECOVERY METHODS**

This section is not applicable to the Eastside and Castle gold and silver property.



# **18.0 PROJECT INFRASTRUCTURE**

This section is not applicable to the Eastside and Castle gold and silver property.



## **19.0 MARKET STUDIES AND CONTRACTS**

This section is not applicable to the Eastside and Castle gold and silver property.



# 20.0 ENVIRONMENTAL STUDIES, PERMITTING AND SOCIAL OR COMMUNITY IMPACT

This section is not applicable to the Eastside and Castle gold and silver property.



### 21.0 ECONOMIC ANALYSIS

This section is not applicable to the Eastside and Castle gold and silver property.



## **22.0 ADJACENT PROPERTIES**

No information on adjacent properties is reported or considered pertinent.



## 23.0 OTHER RELEVANT DATA AND INFORMATION

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



#### 24.0 INTERPRETATION AND CONCLUSIONS

#### 24.1 Eastside Area

The work to date at the Eastside area has provided reliable data on which to base resource estimates and plan future exploration. Mr. Ristorcelli worked with and reviewed the project data, including the Eastside drill-hole database and geologic interpretations, and visited the project site three times. Mr. Ristorcelli believes that the data provided by Allegiant and its predecessors, as well as the geological interpretations Allegiant has derived from the data, are accurate and reasonably represent the geology at the Eastside area.

The mineralization at Eastside is best interpreted in the context of the volcanic-hosted, low-sulfidation type of epithermal model. Various vein textures, mineralization and alteration features at Eastside are typical of low-sulfidation epithermal gold-silver deposits world-wide. Moreover, surface exposures of acid-leached zones in proximity to the area of recent drilling suggest a shallow level of erosion. The mineralization is generally oxidized. The controls on the distribution of the higher-grade mineralization are not yet completely understood and, in some cases, difficult to confidently project, but moderately to steeply dipping structures and the margins of the rhyolite domes, and intrusive contacts within them, seem to be the most important.

The Eastside resources are classified as Inferred because there are presently some geologically sound although speculative interpretations of the controls on mineralization and to a lesser extent there are some as-yet unexplained biases in assays of duplicate RC samples from 2015. However, the resource model and estimate justify a higher classification because of the effort put into exploration and modeling. With further drilling, the majority of the Inferred gold and silver resources as modeled and estimated are expected to become classified as Indicated or Measured resources, even if found to be incorrect in detail. Three periods of post-model drilling since November 2016 substantially supported the then-existing interpretation of general orientation and geometry of modeled mineralization. The model has remained substantially the same throughout the two updates in spite of having substantially more drilling.

Because of the complicated geology, predicting locations of higher-grade mineralization locally is difficult and will require more drilling to upgrade the classification to better than Inferred.

The author is not aware of any significant risks or uncertainties not discussed in this report that could reasonably be expected to affect the reliability or confidence in the exploration information as applied to the estimated mineral resources.

While there has been success in defining a substantial precious-metal deposit, what has been tested is likely only a small portion of what could exist at the Eastside area.

#### 24.2 Castle Area

Exploration to date at the Castle area has provided sufficiently reliable data to do an initial resource estimate of Inferred classification and to plan future exploration. Mr. Ristorcelli reviewed the existing data and geologic interpretations with Allegiant and visited the project site. MDA built the Castle drillhole database. Exploration and mining at Castle were conducted by multiple companies including, most



recently, Allegiant in 2020. Historical information at Castle does not have the support or quality control that would be necessary for higher classification on its own or without caveats. However, data from the various exploration campaigns corroborate each other and indicate that mineralization is deposited in sub-horizontal tabular bodies of gold mineralization.

Castle gold resources are classified as Inferred because of the historical drilling with sometimes poor supporting documentation, large volumes of groundwater encountered during drilling, and lack of core to define controls and styles of mineralization. In spite of those observations, there is little question that the Inferred material will be upgraded to at least Indicated with additional drilling.

The mineralization at Castle is relatively predictable, compensating for what would have otherwise been a difficult deposit to estimate with the given data. Gold mineralization is concentrated in the Blaire Junction andesite, which is sandwiched between the Palmetto basement rocks and the overlying gravel, helping confine the estimate significantly. There is a possibility that the basement rocks host mineralization, however, none was estimated because of potential RC-sample contamination from the large volumes of water encountered while drilling. This excessive groundwater poses a complication to exploration and will require at least some core to be drilled.

The Castle tabular bodies are open ended and the resource will increase in size with additional drilling.

Metallurgical testwork and records of gold recovery from the historic Boss Mine are minimal. What information does exist suggests that gold recovery by cyanide extraction is probable to likely. Furthermore, geologic logging indicates that essentially all of the mineralization is oxidized.



#### **25.0 RECOMMENDATIONS**

The Eastside and Castle gold-silver property is deserving of significant additional exploration and additional metallurgical testing. The recommended approach to project development for the Eastside area is two-phased. The first phase consists of an exploration drill campaign and some metallurgy. If successful, a larger Phase II program would be required and would likely include some engineering.

At the Castle area, permitting and geophysics is recommended as the initial phase of exploration, followed by both core and RC drilling. Only Phase I recommendations are outlined in this report as the outcome of Phase I could introduce highly variable estimates of costs for Phase II. Ristorcelli believes that Phase II costs could be several times larger than Phase I.

The total recommended Phase I exploration program totals \$3.7 million for both Eastside and Castle.

### 25.1 Eastside Area Phase I

The size of the mineralizing system at Eastside is very large. Even though a substantial resource has been defined, significantly more exploration, including drilling, is merited around and distal to the resource. The cost estimate for Phase I for the Eastside area is given in Table 25.1. Unit costs are derived from Allegiant's experience at Eastside. The following describes the Phase I recommended work program.

<u>Permitting</u>: Permitting is almost complete as of this writing to expand the area of drilling from 601 acres to approximately 3,600 acres, beyond that already drilled. Based on Allegiant's expectations of pending costs, this could reach \$60,000.

Exploration and Expansion Drilling: Exploration drilling is that to be conducted south, east and west of the main drilled target area. Details of drill-hole locations will depend on access and additional surface disturbance, but up to 18,300m of drilling is recommended, of which 4,800m would be deep core drilling. All-in drilling costs except road building are \$2,666,000, excluding contingency.

<u>Metallurgical Testing</u>: Additional metallurgical testing should be conducted to confirm and optimize recoveries that have been proposed in this report. Those efforts should be concentrated on heap leaching, but since milling the high-grade material shows potentially better economic performance, some additional and more formal milling test work should be done. MDA expects these costs to be around \$185,000.

<u>Geologic Studies and Reporting</u>: In addition to the above, general geologic studies and reporting of results from the work proposed are needed.

### 25.2 Castle Area Phase I

Table 25.1 also has work recommended for the Castle area of the project, which is \$160,000. That work includes permitting and geophysics in preparation for a larger drill program. However, since a modest resource exists, Phase II for Castle should consider significant drilling by both core and RC to upgrade the estimate's classification but also to better understand the mineralization. The following exploration activities are recommended for the Castle area of the project:



<u>Geophysics:</u> A ground magnetic survey could provide valuable structural information for subsurface geology. The estimated cost is \$10,000. A CSAMT survey could also provide valuable structural information for subsurface geology with an estimated cost of \$40,000.

Category	Qty		USD	Unit Cost	
Eastside					
Permitting			\$60,000		
Deep exploration drilling (core)	4,800	meters	\$1,176,000	\$245	/m
Exploration drilling - East Pediment (RC)	4,000	meters	\$360,000	\$90	/m
Exploration drilling - South Target (RC)	5,500	meters	\$550,000	\$100	/m
Exploration drilling - Western Anomaly (RC)	4,000	meters	\$400,000	\$100	/m
Metallurgy - Bottle Roll Tests			\$45,000		
Metallurgy - Heap Leach Tests			\$140,000		
Road Building			\$180,000		
Field Personnel			\$300,000		
Reporting and geologic studies			\$150,000		
Contingency (rounded)	5%		\$170,000		
Sub-total for Eastside Area (rounded to 10,000)			\$3,530,000		
Castle					
Permitting			\$100,000		
Ground magnetic survey			\$10,000		
CSAMT survey			\$40,000		
Contingency (rounded)	5%		\$10,000		
Sub-total for Castle Area			\$160,000		
Total (rounded to 100,000s)			\$3,700,000		

#### Table 25.1 Cost Estimate for the Phase I Eastside and Castle Recommended Program

#### 25.3 Eastside Area Phase II

Upon success of any of the drilling proposed in Phase I, additional drilling should be conducted. MDA expects that Phase II drilling programs could be several times larger than what is proposed in Phase I.

### 25.4 Castle Area Phase II

Upon success of the work proposed in Phase I, drilling should be conducted. MDA expects that Phase II drilling will be substantial possibly reaching 150 RC holes and a dozen core holes all around 100 to 200m deep.



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### 27.0 DATE AND SIGNATURE PAGE

Effective Date of report:

July 30, 2021

Completion Date of report:

July 30, 2021

"Steven Ristorcelli, C.P.G." Steven J. Ristorcelli, C.P.G. Date Signed: July 30, 2021



#### **28.0 CERTIFICATION OF QUALIFIED PERSONS**

#### **STEVEN J. RISTORCELLI, P. GEO.**

I, Steven Ristorcelli, C. P. G., do hereby certify that I am currently an associate of: Mine Development Associates, Inc., 210 South Rock Blvd., Reno, Nevada 89502, a division of RESPEC.

I am the author of the report entitled "*Updated Resource Estimate and Technical Report, Eastside and Castle Gold-Silver Property, Esmeralda County, Nevada*" prepared for Allegiant Gold Ltd. with an Effective Date of July 30, 2021 and dated July 30, 2021. I take responsibility for all sections of the Technical Report subject to those issues discussed in Section 3.0.

I graduated with a Bachelor of Science degree in Geology from Colorado State University in 1977 and a Master of Science degree in Geology from the University of New Mexico in 1980. I am a Certified Professional Geologist (#10257) with the American Institute of Professional Geologists.

I have worked as a geologist continuously for over 40 years since graduation from undergraduate university. During that time I have been engaged in the exploration, definition, and modeling of dozens of epithermal goldsilver deposits in North America, Central America and South America, and have estimated the mineral resources for many such deposits.

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

I visited the Eastside project on March 16, 2016, on May 5 and 6, 2016, and the Castle and Eastside areas April 8, 2021.

Prior to the work for and authoring of the report titled *Resource Estimate and Technical Report, Eastside Gold-Silver Project, Esmeralda County, Nevada*, for Columbus Gold Corporation and dated December 2, 2016, I had no prior involvement with the property and project. I am independent of Allegiant Gold Ltd., Columbus (US Property Holding) Corporation, Cordilleran Exploration Company, LLC, and all their subsidiaries as defined in Section 1.5 of NI 43-101 and in Section 1.5 of the Companion Policy to NI 43-101.

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

As of the Effective Date of this 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 this Technical Report not misleading.

Dated this 30th day of July 2021

"Steven J. Ristorcelli"

Signature of Qualified Person Steven Ristorcelli

## LISTING OF UNPATENTED FEDERAL LODE MINING CLAIMS

#### 695 unpatented lode mining claims

OWNER/LESSOR: Allegiant Gold (U.S.) Corporation c/o Cordex Exploration Co. 573 East 2<sup>nd</sup> Street

Reno, Nevada 89502

Claim Name	<b>BIM So</b>	rial Number		County Document	Bool	<i>,</i>	Dago #	
<u>Claim Name</u> ES 33	NMC#	erial Number 1095193	Doc#	190071	<u>Bool</u> Book	<u>322</u>	Page #	487
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#### 175 unpatented lode mining claims

#### OWNER/LESSOR: McIntosh Exploration LLC

Larry L. McIntosh, Manager 1955 Stephen Ct.

Gardnerville, NV 89410

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