



**U.S. Fish and Wildlife Service**

# Environmental Assessment

## for the Issuance of an Eagle Take Permit for the Robertson Exploration Project

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**Nevada**

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## **ACRONYMS AND ABBREVIATIONS**

<b>Applicant</b>	Nevada Gold Mines LLC
<b>BLM</b>	Bureau of Land Management
<b>CFR</b>	Code of Federal Regulations
<b>Eagle Act</b>	Bald and Golden Eagle Protection Act
<b>EA</b>	Environmental Assessment
<b>EIS</b>	Environmental Impact Statement
<b>EMU</b>	Eagle Management Unit
<b>EPM</b>	Environmental Protection Measure
<b>ESA</b>	Endangered Species Act of 1973
<b>LAP</b>	Local Area Populations
<b>mph</b>	miles per hour
<b>NGM</b>	Nevada Gold Mines LLC
<b>NDOW</b>	Nevada Department of Wildlife
<b>NEPA</b>	National Environmental Policy Act
<b>NHPA</b>	National Historic Preservation Act
<b>PEIS</b>	Programmatic Environmental Impact Statement
<b>Plan boundary</b>	Plan of Operations Boundary
<b>Project</b>	Robertson Exploration Project
<b>Project area</b>	Robertson Exploration Project Plan of Operations Boundary and a Surrounding 10-mile Radius
<b>REA</b>	Resource Equivalency Analysis
<b>ReGAP</b>	Southwest Regional Gap Analysis Project
<b>Service</b>	U.S. Fish and Wildlife Service
<b>U.S.</b>	United States
<b>U.S.C.</b>	United States Code

## 1.0 Introduction

This Environmental Assessment (EA) analyzes the environmental consequences of the United States (U.S.) Fish and Wildlife Service (Service) issuing an incidental take permit for the take of golden eagles (*Aquila chrysaetos*) associated with the Robertson Exploration Project (Project) pursuant to the National Environmental Policy Act (NEPA) (42 United States Code [U.S.C.] §§ 4321–4347). Issuance of an eagle take permit by the Service for take that is incidental to otherwise lawful activities under the Bald and Golden Eagle Protection Act (Eagle Act) (16 U.S.C. §§ 668–668d and 50 Code of Federal Regulations [CFR] § 22.26) constitutes a discretionary federal action that is subject to NEPA. This EA assists the Service in ensuring compliance with NEPA, and in making a determination as to whether any “significant” impacts could result from the analyzed actions that would require preparation of an Environmental Impact Statement (EIS). This EA evaluates the effects of alternatives for the Service’s decision whether to issue an eagle take permit.

The Eagle Act authorizes the Service to issue eagle take permits only when the take is compatible with the preservation of each eagle species, defined as “consistent with the goals of maintaining stable or increasing breeding populations in all eagle management units and the persistence of local populations throughout the geographic range of each species” (50 CFR 22.3).

The Applicant, Nevada Gold Mines LLC (NGM), is requesting Eagle Act take coverage for resource exploration associated with the Project and has submitted an incidental eagle take permit application to the Service. The Applicant’s monitoring plan (**Appendix A**) and details within existing Bureau of Land Management (BLM) NEPA documents (BLM 2013) are the foundation of the application from NGM.

The Applicant is requesting a permit for reoccurring disturbance to and loss of annual productivity from one golden eagle breeding pair over four years. This EA evaluates whether issuance of the incidental eagle take permit would have significant impacts on the existing human environment. “Significance” under NEPA is defined by regulation at 40 CFR 1508.27, and requires short- and long-term consideration of both the context of a proposal and its intensity.

This proposal conforms with, and carries out, the management approach analyzed in, and adopted subsequent to, the Service’s Programmatic Environmental Impact Statement (PEIS) for the Eagle Rule Revision, December 2016 (USFWS 2016a). Project-specific information not considered in the PEIS has been considered in this EA as described below. Based on this Project-specific analysis and application of the criteria provided in the PEIS, the Service has determined that an EA is the appropriate level of review.

## 1.1 Purpose and Need

The Service's purpose in considering the proposed action is to fulfill their authority under the Eagle Act (16 U.S.C. §§ 668–668e) and its regulations (50 CFR § 22). Applicants whose otherwise lawful activities may result in take of eagles can apply for eagle incidental take permits so that their projects may proceed without potential violations of the Eagle Act. The Service may issue eagle take permits for eagle take that is associated with, but not the purpose of, an activity. Such permits can be issued by the Service when the take that is authorized is compatible with the Eagle Act preservation standard; it is necessary to protect an interest in a particular locality; and it is associated with, but not the purpose of, the activity; and it cannot be practicably avoided (50 CFR § 22 and 81 Federal Register [FR] 91494).

The need for this action is a decision on an eagle incidental take permit application from NGM. The decision must comply with all applicable regulatory requirements and be compatible with the preservation of eagles.

## 1.2 Authorities

Service authorities are codified under multiple statutes that address management and conservation of natural resources from many perspectives, including, but not limited to the effects of land, water, and energy development on fish, wildlife, plants, and their habitats. This analysis is based on the Eagle Act (16 U.S.C. 668–668e) and its regulations (50 CFR 22). The PEIS (USFWS 2016a) has a full list of authorities that apply to this action (USFWS 2016a: Section 1.6, pages 7-12).

## 1.3 Background

NGM has been authorized by the BLM Battle Mountain District Office to conduct exploration drilling within the Robertson Exploration Project Plan of Operations boundary (Plan boundary) (**Figure 1-1**). The Project is located on the east slope of the Shoshone Range in Lander County, Nevada, approximately 58 miles southeast of Battle Mountain, 70 miles southwest of Elko, and 37 miles south of Interstate 80. Sporadic lode and placer mining have occurred in the vicinity of the Project by various entities since the first discovery of silver in 1873. The most recent period of mining ceased in 1989. NGM acquired the Project in 2017 and it is currently a mid-stage exploration project.

The current Project includes conducting an exploration drilling program to determine the extent and quality of a mineral resource in the area. Activities within the Plan boundary include proposed new surface disturbance for creation of drill pads and drill roads with existing disturbed areas used to the extent possible, placement of drill rigs and support features, and diamond core drilling conducted with Atlas Copco CT-14 Christensen Surface Core drilling rigs or similar models. Drilling occurs up to 24 hours a day with approximately three employees per rig. Additional activities associated with exploration activities also occur periodically in the Plan

boundary, including but not limited to, soil sampling, field verification, biological baseline surveys, surface water sampling, use of laydown and storage areas, and construction and monitoring of groundwater wells.

Within the vicinity of the BLM-authorized drilling, two nest sites (GQM-01 and GQM-02) are located on manmade features (i.e., existing pit highwalls) and one nest site is located on a natural feature (GQM-03). The location of the ore body occurs immediately beneath and around the nests.

The Project area (Robertson Exploration Project Plan of Operations boundary and a surrounding 10-mile radius) includes various rock outcrops and pit highwalls that are identified as potential eagle nesting areas. Shrub communities directly north of the Project and in valleys surrounding the Project provide valuable foraging habitat. Limited water sources and very little riparian habitat are present in the Project area. In addition, paved and non-paved roads are located in the Project area that provide carrion for eagles and represent potential high value scavenging habitat.

#### 1.4 Scoping, Consultation, and Coordination

This EA incorporates by reference the scoping performed for the PEIS (Chapter 6, page 175) (USFWS 2016a). The draft EA will be made public on the Service's Pacific Southwest Region webpage (<https://www.fws.gov/cno/>) for 30 days to solicit public comments.

#### 1.5 Tribal Coordination

Tribal participation is an integral part of the NEPA and the National Historic Preservation Act (NHPA) process, as well as a key component of determining whether to issue an eagle take permit. Cultural and religious concerns regarding eagles were analyzed in the PEIS (USFWS 2016a), and tribal consultation already conducted for the PEIS (USFWS 2016a). The PEIS (USFWS 2016a) identified tribal coordination as an important issue for subsequent analysis, given the cultural importance of eagles to the tribes. In accordance with Executive Order 13175, Consultation and Coordination with Tribal Governments (65 Federal Register 67249, November 9, 2000), the NHPA Section 106 (36 CFR 800) and the Service's Native American Policy, the Service consults with Native American tribal governments whenever actions taken under the authority of the Eagle Act may affect tribal lands, resources, or the ability to self-govern. This coordination process is also intended to ensure compliance with the American Indian Religious Freedom Act.

To potentially initiate consultation with Tribes regarding potential issuance of an eagle take permit, the Service sent letters to nine federally-recognized tribal governments located within 109 miles (the natal dispersal distance of golden eagles, thought to adequately define the species local area population [LAP]) of the Project informing them of the received permit application and preparation of this EA, and offering the opportunity for formal consultation regarding

potential issuance of the permit. In addition, comments from Tribes are also encouraged and welcomed during the 30-day comment period on the EA.

## **2.0 Proposed Action and Alternatives**

### **2.1 Alternative 1: Proposed Action**

The Service proposes to issue an incidental eagle take permit, with associated conditions, to the Applicant for the reoccurring disturbance to and loss of annual productivity from one golden eagle breeding pair, as allowed by regulation (Proposed Action). The duration would be for up to four years. However, unless the Service determines the lack of nesting and/or loss of productivity is caused by another means, any lack of nesting and/or no productivity by the eagle pair would be attributed to Project activities.

If a permit is issued, all monitoring and adaptive management measures, minimization measures, and detection and reporting measures outlined in Section 2.3 would be permit requirements.

#### ***2.1.1 Compensatory Mitigation***

The permit would require mitigation, in the form of power pole retrofits, to offset impacts and contribute to the preservation of eagles associated with the annual disturbance take of one breeding pair (0.59 eagles lost productivity) for four years. The amount of compensatory mitigation required for four years of loss of productivity has been determined through the Service's Golden Eagle Resource Equivalency Analysis (REA) (USFWS 2018). NGM would contribute compensatory mitigation in an amount equal to the power pole retrofit of one or the other, or a combination of both:

- 94.20 poles (avoided loss from retrofits maintained and effective for 10 years); or
- 41.00 poles (avoided loss from retrofits maintained and effective for 30 years).

Additionally, based on the results of monitoring described in Section 2.3.1, the Service would decide if compensatory mitigation shall be paid for the current breeding year or held for the next breeding year. Compensatory mitigation shall be paid if monitoring determines that golden eagles are attempting to use the territory and exploration activities for that year are proposed within one-mile of any of the nests in the territory.

### **2.2 Alternative 2: No Action Alternative**

Under the No Action Alternative, the Service would take no further action on NGM's permit application. However, the Service must take action on the permit application and determine whether to deny or issue the permit. Accordingly, this alternative is considered because Service policy requires evaluation of a No Action Alternative and it provides a clear comparison of any potential impacts to the human environment from the Proposed Action. The No Action

Alternative in this context analyzes predictable outcomes of the Service not issuing a permit. Should a Permit not be issued, compensatory mitigation would not be required. Thus, for purposes of analyzing the No Action Alternative, the conservation measures proposed in the Permit application package would not be required. The Applicant may choose to voluntarily implement some, none, or all of those conservation measures. Under this alternative, it is assumed that the Applicant would take reasonable steps to avoid taking eagles, but NGM would not be protected from enforcement for violating the Eagle Act should take of an eagle occur.

### 2.3 Common to All Alternatives

This section describes components of the Project that are the same for the Proposed Action and No Action Alternative, and whether or not a permit is issued. If a permit is issued, these measures would become permit requirements.

#### *2.3.1 Monitoring and Adaptive Management*

The Applicant will implement all measures required by other agencies and jurisdictions to conduct the activity at this site, including applicant-committed Environmental Protection Measures (EPMs). The applicant will implement all conservation measures and commitments described in the Applicant's monitoring plan (**Appendix A**) and those summarized below.

Monitoring will be implemented over the life of the Project. **Table 2-1** presents a summary of the EPMs with monitoring and a schedule for implementation.

**Table 2-1 EPM Monitoring Schedule**

<b>EPM</b>	<b>Monitoring Actions</b>	<b>Duration</b>
EPM 1	<p>Surveys would be conducted prior to ground disturbance in the breeding and nesting seasons (March 1 through July 31) to determine the presence or absence of eagles as well as other raptors species protected under the Migratory Bird Treaty Act. If nesting or brooding eagles are determined to be present, NGM would avoid the area using a buffer zone developed in coordination with the BLM and Nevada Department of Wildlife (NDOW).</p> <p>Source: BLM 2013</p>	Annually until End of Project
EPM 2	<p>When proposed exploration and drilling actives are scheduled to occur during the golden eagle nesting season, within a one-mile radius of GQM-01, and while GQM-01 is considered to be in-use by golden eagles, the following monitoring would be implemented:</p> <p><u>Hatch and Age Determination Monitoring:</u> Monitoring to determine approximately when hatching occurs and when young reach three weeks of age would occur for planning and coordination purposes. This monitoring would occur twice-weekly for approximately one month.</p> <p><u>Drilling Monitoring:</u> Drilling would start at the drill locations farthest from the nest and outside of the viewshed, progressing inward toward the nest. Upon completion of the drill locations outside of the viewshed, drilling would start at the drill locations farthest from the nest within the viewshed, progressing inward toward the nest.</p>	As needed until End of Project

	<p>During the first 14 days after the young reach three weeks of age, daily nest monitoring (from sunrise to sunset) would occur. Near the completion of the 14-day monitoring, NGM would coordinate closely with the agencies to determine the adequacy of current monitoring and potential applicability of modified nest monitoring efforts. Based on the results of those communications, nest monitoring would proceed at the specified frequency, duration, and methodologies determined appropriate at that time. It is anticipated that the nest would be monitored twice-weekly (back-to-back days from sunrise to sunset) when the young are between five and eight weeks of age, and then once weekly when the young are about eight weeks of age until the young no longer display dependency on the nest site. Source: NGM 2019</p>	
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### 2.3.2 *Minimization Measures*

NGM has currently implemented the following measures and will continue to implement the measures to minimize impacts to golden eagles from the Project.

Vehicle Speed Limits: Speed limits within the Plan boundary will be modified to be a maximum of 25 miles per hour (mph) to reduce the risk of vehicle collisions with eagles. The only exception to this is Nevada State Route 306, on which NGM does not have the authority to regulate speed limits. The modified speed limit will also reduce the number of carcasses on the roadways from terrestrial mammal collisions.

Carcass Management: NGM staff will remove carcasses from all roadways within the Project area when on site and dispose of them appropriately to reduce the risk of vehicle collisions.

Employee Awareness and Training Program: Staff and contractors utilizing the Project area will be provided training on reducing risks to eagle collisions, reporting eagle and nest observations, and any Service requirements provided within the eagle permit.

### 2.3.3 *Detection and Reporting Measures*

Eagle injuries, mortalities, and previously undocumented eagle nests will be detected through incidental observations by NMG personnel and contractors. To improve the probability that injuries and mortalities do not go undetected, NGM field staff will be advised to remain alert for eagles within exploration areas and access roads at all times. The detection of any new nest sites will occur through annual raptor nest monitoring (aerial and ground) and incidental observations.

In the event that a new nest is detected within proximity to exploration activities, the NGM Environmental Department or designee will record the circumstances and conditions associated with the observation. Among the information recorded and reported to the Service will be the date and time of the detection, the Global Positioning System location (North American Datum 83), the status of the nest, and if possible, the species.

When NGM personnel or their contractors encounter a golden eagle injury or mortality within the Plan boundary, they must report the incident to the NGM Environmental Representative. Personnel must not handle dead or injured eagles unless specifically directed to do so by the Service. In the event of an eagle injury, NGM's Environmental Representative will notify the Service and NDOW immediately (the same business day) and in the event of mortality, notification will occur by the next business day.

## 2.4 Other Alternatives Considered but Not Evaluated in this Environmental Assessment

The Service considered other alternatives based on communication with the Applicant but concluded that these alternatives did not meet the purpose and need underlying the action because they were impracticable for the Applicant to carry out or did not adequately address the risk of take at the Project. Therefore, the Service did not assess the potential environmental impacts of those alternatives. Below is a summary of the alternatives considered but eliminated from further review.

### *2.4.1 Alternative 3: Deny Permit*

Under this alternative, the Service would deny the permit application because the Applicant falls under one of the disqualifying factors and circumstances denoted in 50 CFR 13.21, the application fails to meet all regulatory permit issuance criteria and required determinations listed in 50 CFR 22.26, or because the Service determined that the risk to eagles is so low that a take permit is unnecessary.

Our permit issuance regulations at 50 CFR 13.21(b) set forth a variety of circumstances that disqualify an Applicant from obtaining a permit. None of the disqualifying factors or circumstances denoted in 50 CFR 13.21 apply to NGM. Next, the Service considered whether the Applicant meets all issuance criteria for the type of permit being issued. For eagle take permits, those issuance criteria are found in § 22.26(f). NGM's application meets all the regulatory issuance criteria and required determinations (50 CFR 22.26) for eagle take permits.

When an Applicant for an eagle take permit is not disqualified under 50 CFR 13.21 and meets all the issuance criteria of 50 CFR 22.26, denial of the permit is not a reasonable option. Therefore, this alternative, denial of the permit, was eliminated from further consideration.

## **3.0 Affected Environment**

This section describes the current status of the environmental resources and values that are affected by the Proposed Action and alternatives.

### 3.1 Golden Eagles

General information on the population trends, distribution, and habitat of golden eagles are detailed in Sections 3.3 and 3.4 of the PEIS (USFWS 2016a). This section more specifically describes the golden eagle population in the Project area.

#### *3.1.1 Project Area Habitat*

##### **Foraging Habitat**

Vegetation communities in the Project area have been mapped by the Southwest Regional Gap Analysis Project (ReGAP) in land cover files (USGS 2011). The ReGAP mapping shows 30 vegetation communities occurring within the 10-mile radius of the Plan boundary (**Table 3-1**). Five are mapped as over five percent of the Project area: Inter-Mountain Basins Big Sagebrush Shrubland (30 percent), Great Basin Xeric Mixed Sagebrush Shrubland (18 percent), Inter-Mountain Basins Montane Sagebrush Steppe (14 percent), Inter-Mountain Basins Greasewood Flat (11 percent), and Inter-Mountain Basins Mixed Salt Desert Scrub (10 percent). Each of the remaining 25 communities were mapped as five percent or less of the Project area. The potential foraging value of the various habitat types present in the region has not been quantified, but in general, the Inter-Mountain Basins Big Sagebrush Shrubland, Great Basin Xeric Mixed Sagebrush Shrubland, Inter-Mountain Basins Montane Sagebrush Steppe, and Inter-Mountain Basins Mixed Salt Desert Scrub are believed to represent the highest-value native foraging habitat. These four communities account for about 73 percent of the mapped habitat within the Project area.

**Table 3-1 ReGAP Vegetation Communities within the Project Area**

Vegetation Community	Acres	Percent
Agriculture	673	0.24
Barren Lands, Non-specific	753	0.26
Great Basin Foothill and Lower Montane Riparian Woodland and Shrubland	543	0.19
Great Basin Pinyon-Juniper Woodland	12,156	4.25
Great Basin Semi-Desert Chaparral	91	0.03
<b>Great Basin Xeric Mixed Sagebrush Shrubland</b>	<b>52,427</b>	<b>18.32</b>
<b>Inter-Mountain Basins Big Sagebrush Shrubland</b>	<b>86,008</b>	<b>30.05</b>
Inter-Mountain Basins Big Sagebrush Steppe	302	0.11
Inter-Mountain Basins Cliff and Canyon	5,125	1.79
Inter-Mountain Basins Greasewood Flat	32,214	11.25
<b>Inter-Mountain Basins Mixed Salt Desert Scrub</b>	<b>28,697</b>	<b>10.03</b>
<b>Inter-Mountain Basins Montane Sagebrush Steppe</b>	<b>41,258</b>	<b>14.41</b>
Inter-Mountain Basins Mountain Mahogany Woodland and Shrubland	1,010	0.35
Inter-Mountain Basins Playa	6,750	2.36
Inter-Mountain Basins Semi-Desert Grassland	3,489	1.22
Inter-Mountain Basins Semi-Desert Shrub Steppe	144	0.05
Inter-Mountain Basins Subalpine Limber-Bristlecone Pine Woodland	70	0.02

Vegetation Community	Acres	Percent
Inter-Mountain West Aspen-Mixed Conifer Forest and Woodland Complex	2	0.00
Invasive Annual and Biennial Forbland	1,797	0.63
Invasive Annual Grassland	3,342	1.17
Invasive Perennial Grassland	81	0.03
North American Arid West Emergent Marsh	9	0.00
Open Water	75	0.03
Recently Burned	2,892	1.01
Recently Mined or Quarried	6,024	2.10
Rocky Mountain Aspen Forest and Woodland	203	0.07
Rocky Mountain Dry Tundra	3	0.00
Rocky Mountain Subalpine Dry-Mesic Spruce-Fir Forest and Woodland	34	0.01
Rocky Mountain Subalpine Mesic Meadow	1	0.00
Rocky Mountain Subalpine Mesic Spruce-Fir Forest and Woodland	54	0.02
<b>Total</b>	<b>286,227</b>	<b>100.00</b>

\*Bold denotes habitat types believed to be native foraging habitats of the highest value.

Other habitat types that are believed to represent important golden eagle foraging habitats in the region include roads, natural water sources, wetlands, and meadows. Wetlands and springs provide a reliable water source for eagle prey and, therefore, allow higher concentrations of eagle prey. There are multiple seeps, springs, stock troughs, and intermittent and ephemeral drainages through the Project area. Meadow habitats, agricultural alfalfa pivots, and pastures in the Project area also support large populations of rodents and lagomorphs. These habitats occur at ranches in Crescent Valley and Rocky Pass.

A number of paved (e.g., Interstate 80 and State Highway 306) and non-paved roads are located within the Project area. Golden eagles frequently feed on roadkill and other carrion (especially during winter) even when live prey is available; golden eagles consume fresh carrion during the nesting season (Kochert and Steenhof 2002). Roads within the Project area, particularly improved roads that allow vehicles to travel at higher speeds, represent potentially high-value golden eagle scavenging habitat.

### **Nesting Habitat**

Golden eagle nesting habitat includes cliff and rock outcrops in the Shoshone Mountains to the west, the Cortez Mountains to the east, and the Toiyabe Mountains to the south, and there are multiple open pits with highwalls throughout the Project area. Golden eagles may nest in trees if available.

### **Other Topographic Features Attractive to Eagles**

Tops of slopes oriented perpendicular to prevailing winds or near ridge crests of cliff edges are features that are conducive to slope soaring and are attractive features for eagles. Mountainous areas that include ridgelines and slopes with a variety of aspects, such that winds from multiple

directions would create deflection currents, are also suitable for soaring. Saddles or low points on ridge lines or near riparian corridors may serve as flight paths.

### *3.1.2 Project Area Eagle Population*

The golden eagle nesting territories within the 10-mile radius of the Project were delineated based on surveys conducted between 2013 through 2019. A total of 24 distinct territories were delineated (**Figure 3-1**) based on proximity of nests to one another, concurrent occupancy of adjacent nests, alternating occupancy (from year to year) of adjacent nests, and nearest available quality nesting substrate obtained from surveys and monitoring at the Project. **Appendix B** summarizes the golden eagle territories and occupancy status within the Project area.

The number of fledged young in the Project area has ranged from six to 14 between 2017 and 2019, with an average annual productivity of 1.02 and a range from 0.75 to 1.3 fledged young per occupied (in-use) territory. This falls within values documented for other golden eagle populations, as McIntyre (2002) reports a fledglings per occupied territory rate from 1988 to 1999 of 0.16 to 1.16. The occupancy rates for 2017 through 2019 ranged from 35 to 58 percent. This range in occupancy rates is generally consistent when compared to the values presented by Steenhof et al. (1997), which was 38 to 100 percent, and McIntyre and Adams (1999), which was 33 to 90 percent.

### *3.1.3 Territories Within the Project's Plan Boundary*

One territory occurs within the Plan boundary (**Figure 3-1**). There are three nest sites within the territory including GQM-01 (two nests), GQM-02 (one nest), and GQM-03 (one nest). These nests are within 0.9 mile of each other and have not been simultaneously in use. This territory has been occupied annually since identified in 2014, giving it an occupancy rate of 100 percent. Since the territory has been known, the average fledged young per occupancy is 1.5 (**Appendix B**). GQM-01 and GQM-02 were first observed in the Plan boundary in 2014; GQM-03 was first observed in 2015. Two of the three nest sites have alternated occupancy (GQM-01 and GQM-02), with GQM-02 occupied in 2014, and GQM occupied in 2015 through 2019. During the 2018 surveys, GQM-01 was observed to be an in-use golden eagle nest with two adult golden eagles observed on the nest in March 2018 and one young golden eagle observed in April and May 2018. GQM-02 was observed to have rocks fallen on the nest with some visible sticks, with no golden eagle or other raptor species activity observed. GQM-03 was observed to be a fallen nest with no golden eagle or raptor activity observed (Stantec 2019). The closest nest to this territory is BLM-01 which is 2.9 miles to the northwest of GQM-03, and the next closest nest (BLM-02) is 4.0 miles to the northwest of GQM-03; both are thought to be part of separate territories that have been in use simultaneously in 2016 and 2017.

### *3.1.4 Project Eagle Population Stressors*

#### **Exploration Activities**

Exploration activities include preparation of drill pads, development of roads, and drilling. Risks to golden eagles include unintentional disturbance from activity near nest sites, such as noise and visual irritation from surface disturbance, vehicular traffic on roads, and drilling. Other risks are applicable to golden eagles nesting on highwalls of the nearby inactive pits, which may cause nest abandonment due to the exploration activities occurring nearby.

#### **Roads**

Mobile equipment (i.e., vehicles) used in operations at the Project or traveling to or from the Project could strike and injure or kill wildlife. Road-killed wildlife may attract scavenging eagles, which in turn could be injured or killed by vehicle collision. NGM has speed limits placed on equipment and vehicles operating at the Project (25 mph). The greater risk for vehicle mortality is on area roads outside of the Mine (e.g., Interstate 80 and Nevada State Route 306), which are outside of NGM's control, due to higher speeds and additional traffic.

#### **Utilities**

Electrical utility infrastructure present in the Project area includes power poles, power lines and guy wires, and transformers. These utilities present risks to eagles from electrocution and collision. Electrical transmission and distribution lines that do not include sufficient spacing between energized lines or between energized lines and ground wires represent an electrocution hazard to large birds. The Project is not authorized to construct additional electrical utility infrastructure; therefore, additional electrical utility infrastructure would not be constructed by the proponent within the Project area.

### **3.2 Bald Eagles**

Bald eagles (*Haliaeetus leucocephalus*) are known to occur in the region, but are not expected to be affected by exploration activities associated with the Project; therefore, disturbance and loss of territory of bald eagles are not expected to result from the Project (BLM 2013).

### **3.3 Migratory Birds**

Effects to migratory birds have been analyzed in the PEIS (USFWS 2016a). A variety of migratory birds have been identified in the Plan boundary; however, issuance of the proposed permit is not anticipated to affect one or more species of migratory birds. Additionally, NGM has committed to EPMs to reduce potential impacts to migratory birds within the Plan boundary (BLM 2013).

### **3.4 Species Listed under the Endangered Species Act**

There are no federally threatened or endangered species listed under the Endangered Species Act of 1973, as amended (ESA) (16 U.S.C. §§ 1531-1544), or potential habitat, within the Plan boundary (BLM 2013). The Service's decision regarding an eagle take permit would not alter the physical footprint of the Project and therefore would not alter the Project impacts to federally threatened and endangered species in the Plan boundary. However, under the Proposed Action, required compensatory mitigation in the form of retrofitting electric power poles to offset authorized take of golden eagles under an eagle take permit has the potential to cause effects to ESA-listed species in the area where retrofitting is completed.

### **3.5 Cultural and Socio-economic Interests**

Bald and golden eagles are important symbols of U.S. history and sacred to many Native American cultures. Some Native American cultures utilize eagles, eagle feathers, and other eagle parts for religious practices and cultural ceremonies. Outside of rituals and practices, wild eagles as live beings are deeply important to many tribes (Lawrence 1990, as cited by USFWS 2016a). Numerous tribes confirmed the importance of wild eagles during scoping and tribal consultation for the PEIS. As of the start of the 30-day comment period, no tribes provided comment during scoping and tribal outreach for this EA. The Proposed Action or considered alternatives would not impact cultural or socioeconomic interests beyond the impacts already discussed in the PEIS. Therefore, cultural and socioeconomic interests has not been analyzed further in this EA.

### **3.6 National Historic Preservation Act**

The Project has not changed in scope, timing, or duration since analyzed in the 2013 EA (BLM 2013). As such, NHPA compliance occurred in 2013, and is not analyzed further in this EA.

### **3.7 Climate Change**

Climate change was considered in the PEIS (USFWS 2016a; Section 3.9, page 144), and is not analyzed further in this EA.

## **4.0 Environmental Consequences**

This section summarizes the effects on the environment of implementing the Proposed Action or alternatives to the action. The discussion of overall effects to the environment of the eagle take permit program is provided in the PEIS (USFWS 2016a). This section of this EA analyzes only the effects that were not analyzed in the PEIS (USFWS 2016a) that may result from the issuance of an eagle take permit for this Project.

## 4.1 Alternative 1: Proposed Action

In determining the significance of effects of the Project on eagles, the Service screened the Proposed Action of issuing an eagle take permit for the take of golden eagles against the analysis provided in the PEIS (USFWS 2016a) and the Service's 2016 report, *Bald and Golden Eagles Population Demographics and Estimation of Sustainable Take in the United States, 2016 Update* (USFWS 2016b). The Service assessed Project effects to eagles at the project, local, and regional scales.

### 4.1.1 *Direct and Indirect Effects*

Under the Proposed Action, the Applicant is requesting authorization for disturbance to and loss of annual productivity from one golden eagle breeding pair during the period of up to four years from the date of the issuance of the permit. The breeding pair has one territory that consists of three nest sites (GQM-01, GQM-02, and GQM-03) which located on manmade (i.e., existing pit highwalls) features or natural outcrops within proximity to exploration activities that would occur as a result of the Project. The location of the ore body occurs immediately beneath and around the nests. The Proposed Action would authorize the disturbance to and loss of annual productivity from one golden eagle breeding pair.

The Proposed Action would have a direct impact to the golden eagles in the breeding pair through the presence of drilling in close proximity to their nests, thus causing potential negative impacts to golden eagle breeding and nesting activities.

Disturbance of an occupied golden eagle territory is assumed to result in loss of annual productivity (i.e., number of young reared) from that territory. The Service uses an estimate of 0.59 golden eagle young fledged per occupied nesting territory per year (USFWS 2016c) to estimate loss of annual productivity.

Along with the monitoring and minimization measures outlined in Section 2.3, the Applicant would provide compensatory mitigation to offset the proposed take. To determine the amount of mitigation required, the Service's Golden Eagle REA was used (USFWS 2018). The values described above are directly entered into the REA to calculate the required compensatory mitigation to offset disturbance of the breeding pair for four years.

Based on the updated Eagle Act permit regulations, a compensatory mitigation ratio of 1.2 to 1 is used. The 1.2 to 1 ratio for compensatory mitigation achieves a net benefit to golden eagle populations ensuring that regional eagle populations are maintained consistent with the preservation standard of the Eagle Act despite indications of declines in golden eagle populations (USFWS 2016a). Using the REA, the Applicant would offset the take of golden eagles at the Project by contributing to a Service-approved fund or an approved in-lieu fee program in the amount equal to retrofitting approximately 90.18 poles (avoided loss from retrofits maintained and effective for up to 10 years) or 39.25 poles (avoided loss from retrofits maintained and

effective for up to 30 years). The final power pole number depends on the on the type and expected longevity of each retrofit. As the implementation of compensatory mitigation would fully offset the estimated take for the Project, and would provide additional net benefit to eagle populations, there would be no significant negative impacts to eagle populations from issuing an eagle take permit under the Proposed Action.

The Service uses electric utility power pole retrofitting to offset authorized take of golden eagles. Electrocutions from power poles is known to be a major cause of eagle mortality. Power poles can be retrofitted by verified methods (such as insulating or covering electrical components or modifying pole elements to increase the distance between electrical components) to reduce the risk of electrocution to eagles, with the maintenance and efficacy of retrofits confirmed through post-installation inspections and monitoring. The effects of retrofitting power poles has been quantified “per eagle”, allowing use of the REA to calculate the number of power pole retrofits needed to offset the authorized take of golden eagles (USFWS 2013).

The Eagle Act regulations require compensatory mitigation to be conducted in the same Eagle Management Unit (EMU) in which the take occurs. The Project is located in the Pacific Flyway EMU. The site of power poles to be retrofitted has not yet been determined but would be in the Pacific Flyway.

In addition, the Proposed Action incorporates adaptive management and minimization measures as described in Section 2.3. The proposed Applicant-committed measures would be implemented to further reduce the risk of Project-related injury or mortality hazards to eagles within the Project boundary.

The Proposed Action meets the purpose and need as it is consistent with the Eagle Act and its regulations and adequately addresses the risk of take at the Project.

### **Bald Eagles**

Because the Project has not changed in scope, timing, or duration, no significant adverse effects are foreseen to bald eagles as a result of the Project (BLM 2013). Although take of bald eagles is not expected to occur at this Project and take of bald eagles would not be permitted, bald eagles in the region may benefit from avoidance and minimization measures established to reduce the risk to golden eagles. Bald eagles may benefit from compensatory mitigation actions provided to offset the take of golden eagles under the Proposed Action.

### **Migratory Birds**

Because the Project has not changed in scope, timing, or duration, no significant adverse effects to migratory bird populations are expected as a result of the Project (BLM 2013). Issuance of an eagle take permit to the Project may also provide benefits to migratory birds. Power pole retrofits

done as compensatory mitigation for the eagle take permit may minimize electrocution risk for raptors and other migratory birds, just as with eagles.

### **Species Listed under the Endangered Species Act**

Because the Project has not changed in scope, timing, or duration, no significant adverse effects are foreseen to endangered species as a result of the Project (BLM 2013).

Although there are no federally threatened or endangered species or potential habitat within the Plan boundary, the Service's decision regarding an eagle take permit under the Proposed Action, requires compensatory mitigation in the form of retrofitting electric power poles (described in Section 4.1.1) to offset authorized take of golden eagles has the potential to cause effects to ESA-listed species.

Section 7 of the ESA requires federal agencies to consult to “insure that any action authorized, funded, or carried out” by them “is not likely to jeopardize the continued existence of any endangered species or threatened species or result in the destruction or adverse modification of [critical] habitat” (16 U.S.C. § 1536(a)(2)). As discussed above Section 4.1.1, the compensatory mitigation sites for retrofitting of power poles to offset any authorized eagle take under an eagle take permit have not yet been identified. Once the compensatory mitigation sites are selected, the Service would conduct an internal Section 7 Consultation and further analyze and address potential effects to ESA-listed species at the location of the power poles that would be retrofitted. The Service anticipates that adverse effects to listed species would be avoidable by timing retrofits to avoid sensitive seasons, and/or through the use of other species-specific avoidance measures. However, if the determination of the Section 7 Consultation was that adverse effects were likely to occur to listed species, the Service would prepare additional NEPA documentation to supplement this EA.

#### *4.1.2 Cumulative Effects*

The purpose of this cumulative effects evaluation is to identify situations where the eagle take proposed under the Proposed Action, combined with take from other present or foreseeable future actions and sources, may be approaching levels that are biologically problematic or that cannot reasonably be offset through compensatory mitigation. Effects of take may be cumulative at the project scale, at the local-area eagle population scale, and at the eagle management unit scale.

At the Project scale, the alteration of the eagle habitat from Project development could cause shifting in eagle pair territory boundaries in the vicinity of the Project, which could cause increased antagonistic interactions with surrounding eagle pairs, potentially creating a ripple-effect of impacts to eagles in areas surrounding the Project.

To ensure that eagle populations at the local scale are not depleted by cumulative take in the local area, the Service analyzed in the PEIS (USFWS 2016a) the amount of take that can be authorized while still maintaining LAP of eagles. The LAP scale is defined for eagles as the median natal dispersal distance for the given species, which for golden eagles is a 109-mile radius (USFWS 2016b). In order to issue a permit, cumulative authorized take must not exceed five percent of a LAP unless the Service can demonstrate why allowing take to exceed that limit is still compatible with the preservation of eagles. The eagle take permit regulations require the Service to conduct an individual LAP analysis for each permit application as part of the application review.

Therefore, the Service considered cumulative effects to the LAP surrounding the Robertson Exploration Project Plan boundary (**Figure 4-1**) to evaluate whether the take to be authorized under this permit, together with other sources of permitted take and unpermitted eagle mortality, may be incompatible with the persistence of the Project's LAP. Data provided by NGM, data on other eagle take authorized and permitted by the Service, and other reliably documented unauthorized eagle mortalities has been incorporated to estimate cumulative impacts to the LAP. The cumulative effects analysis was conducted as described in the Service's Eagle Conservation Plan Guidance (USFWS 2013).

The LAP for the Robertson Exploration Project was estimated to be 787.07 golden eagles. The five percent benchmark for authorized take of that LAP is 39.35 eagles, while current authorized take in the LAP, including that estimated to occur at the Project, is 0.59 golden eagles 0.075% percent of the LAP per year. The take that would be authorized by this permit for the Project does not exceed one percent of the LAP, so would not significantly impact the LAP (**Appendix C**).

Additionally, take of eagles has the potential to affect the larger eagle population. Accordingly, the 2016 PEIS analyzed the cumulative effects of permitting take of golden eagles in combination with ongoing unauthorized sources of human-caused eagle mortality and other present or foreseeable future actions affecting golden eagle populations. As part of the analysis, the Service determined sustainable limits to permitted take within each EMU. The take that would be authorized by this permit would be offset by the compensatory mitigation that would be provided by the Applicant, so it would not significantly impact the EMU eagle population. The minimization measures that would be required under the permit, along with the additional adaptive management measures, are designed to further ensure that the permit is compatible with the preservation of golden eagles at the regional EMU population scale.

## **4.2 Alternative 2: No Action Alternative**

### ***4.2.1 Direct and Indirect Effects***

The Service assumes the level of take is the same under the Proposed Action and No Action Alternative, but under the No Action Alternative, the Service would take no action on the permit application. A permit would not be issued, and compensatory mitigation would not be required. Under this alternative, direct impacts of the Project on the golden eagle population would be assumed to be loss of productivity at one nest site in one golden eagle breeding pair's territory, over four years, and this take would not be offset by compensatory mitigation. The Applicant would continue to implement the monitoring and avoidance measures for the Project as described in the Golden Eagle Monitoring Plan and in Section 2.3; however, additional measures outside of those referenced in **Appendix A** and Section 2.3, including compensatory mitigation, would not be implemented.

This alternative does not meet the purpose and need for the action because, by regulation (50 CFR 13.21), when in receipt of a completed application, the Service must either issue or deny a permit to the Applicant. The No Action Alternative also does not meet the purpose of and need for the action because it would result in the adverse, unmitigated effects to golden eagles described above, and these effects are not compatible with the preservation of golden eagles.

### **Bald Eagles**

Under the No Action Alternative, benefits that bald eagles might incur from minimization measures established under a golden eagle take permit to reduce the risk to golden eagles, as well as from compensatory mitigation actions provided to offset the take of golden eagles, would not occur.

### **Migratory Birds**

Any incidental benefits to migratory birds from minimization measures and compensatory mitigation required under an eagle take permit would not be realized under the No Action Alternative.

### **Species Listed under the Endangered Species Act**

Any incidental effects to federally threatened and endangered species from minimization measures and compensatory mitigation required under an eagle take permit would not be realized under the No Action Alternative.

### ***4.2.2 Cumulative Effects***

Cumulative impacts are defined as incremental impacts of the action on the environment when added to other past, and present, and reasonably foreseeable future actions. The geographic

extent of for the analysis of cumulative impacts is within a 175-kilometer (109-mile) radius surrounding the project (Local Area Population, LAP), which represents the average natal dispersal distance of golden eagles (USFWS 2016a). There is incomplete information available regarding the level of unpermitted golden eagle take in the region; thus, golden eagle take in the past, present, and foreseeable future is not fully known. Over the past 19 years the Service knows of 244 golden eagles killed by a variety of causes (**Appendix C**). This information suggest that approximately 12.84 golden eagles are killed per year in the LAP. Thus, the known annual unpermitted take suggests an anticipated unpermitted take of approximate 1.63 percent per year for the LAP. One permit has been issued (#90099B) and one permit is pending (#20776D) within the LAP could each authorized the loss of golden eagle productivity at one golden eagle territory each year for an estimated annual take of 0.59 golden eagles per year. The total anticipated cumulative take would be 1.85 percent per year for the LAP (**Appendix C**). The loss of productivity authorized by permits would be fully offset by the compensatory mitigation that would be provided by the permit holders. The anticipated unpermitted take of approximate 1.63 percent per year for the LAP would not be offset by compensatory mitigation.

#### 4.3 Comparison of Effects of Alternatives

The main differences between the Proposed Action and the No Action Alternative are the issuing of a permit with compensatory mitigation requirements to offset the permitted take under the Proposed Action and the level of concurrent and post-construction monitoring that would occur (**Table 4-2**). The Service assumes the level of take is the same under the Proposed Action and No Action Alternative, but under the No Action Alternative, compensatory mitigation would not be required.

The Proposed Action is likely to have no significant impacts on golden eagles as there is no unmitigated take, and it meets all regulatory requirements and the conservation standard set forth in the 2016 PEIS (USFWS 2016a).

**Table 4-2 Comparison of the Proposed Action and No Action Alternative**

	<b>Alternative 1: Proposed Action</b>	<b>Alternative 2: No Action Alternative</b>
<b>Eagle Take Levels</b>	Loss of productivity from one golden eagle nest in each of four years.	Loss of productivity from one golden eagle nest in each of four years.
<b>Avoidance and Minimization</b>	NGM has implemented the Golden Eagle Mitigation and Monitoring Plan ( <b>Appendix A</b> ) and will continue to implement the measures to minimize impacts to golden eagles at the Project including: vehicle speed limits; employee awareness/training programs; carcass management; and drilling at the locations furthest from the nest sites first and progressing inward.	Same as detailed under the Proposed Action, as the applicant is committed to these measures even without issuance of a permit.

	<b>Alternative 1: Proposed Action</b>	<b>Alternative 2: No Action Alternative</b>
<b>Compensatory Mitigation</b>	Retrofitting of power poles to offset the loss of one breeding pair's productivity over the four-year permit term.	None provided.
<b>Detection and Reporting</b>	NGM will continue to meet their BLM requirements from the 2013 EA and implement the Golden Eagle Nest Monitoring Plan ( <b>Appendix A</b> ), as well as implement an eagle nest site reporting and detection system to ensure that environmental personnel adhere to the appropriate actions should a previously unidentified nest, injured eagle, or deceased eagle be identified.	Same as detailed under the Proposed Action, as the applicant is committed to these measures even without issuance of a permit.
<b>Unmitigated Eagle Take</b>	None.	Loss of productivity from one golden eagle nest in each of four years.
<b>Adaptive Management</b>	NGM will coordinate with the Service regarding any concerning golden eagle activity beyond what is described in this EA. NGM will also review all future mine projects during the planning stage and identify potential risks these future projects may have on the area golden eagle population.	None.
<b>Data Collection/Monitoring</b>	NGM will monitor golden eagle nests within the Plan boundary and within the Project area for the duration of drilling activities (active mining and post-construction) in accordance with Pagel et al. (2010). Additionally, a pre-egg laying survey will determine territorial occupancy in the Project boundary. NGM will also document any Project-related mortality, including monitoring the alignments of power lines for electrocuted birds within the Plan boundary, and monitoring hazardous waste-containing facilities for any failures of the mine's exclusion system until the end of mine life.	NGM will conduct annual monitoring in accordance with Pagel et al. (2010) for the Project, as the applicant is committed to these measures even without issuance of a permit.
<b>Company Liability for Eagle Take</b>	None, if NGM is in compliance with permit conditions.	Yes.
<b>Meets Eagle Act Regulatory Requirements</b>	Yes.	No.

## 5.0 Mitigation

The Proposed Action incorporates measures to minimize and avoid impacts to the maximum degree practicable, as required by regulation. To ensure that regional eagle populations are maintained consistent with the preservation standard, regulations require that any golden eagle take that cannot practicably be avoided and is above EMU take limits must be offset by compensatory mitigation at a 1.2 to 1 ratio. As golden eagle take limits for all EMUs were determined to be zero (USFWS 2016a), compensatory mitigation is necessary to offset any authorized take of golden eagles. The 1.2 to 1 ratio for compensatory mitigation achieves a net benefit to golden eagle populations, ensuring that regional eagle populations are maintained consistent with the preservation standard of the Eagle Act despite indications of declines in golden eagle populations (USFWS 2016a). As this would fully offset the estimated take, as well as provide an additional net benefit to eagle populations, there would be no significant effects to eagle populations from issuing an eagle take permit under the Proposed Action. Section 2.3 provides details of the compensatory mitigation and minimization measures that would be completed under the Proposed Action.

## **6.0 List of Preparers and Reviewers**

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- Josh Vittori, Natural Resource Specialist, Stantec Consulting Services Inc.
- Jason Trook, GIS Specialist, Stantec Consulting Services Inc.
- Steve Schoen, Nevada Gold Mines LLC
- Stephen Fettig, Wildlife Biologist, U.S. Fish and Wildlife Service

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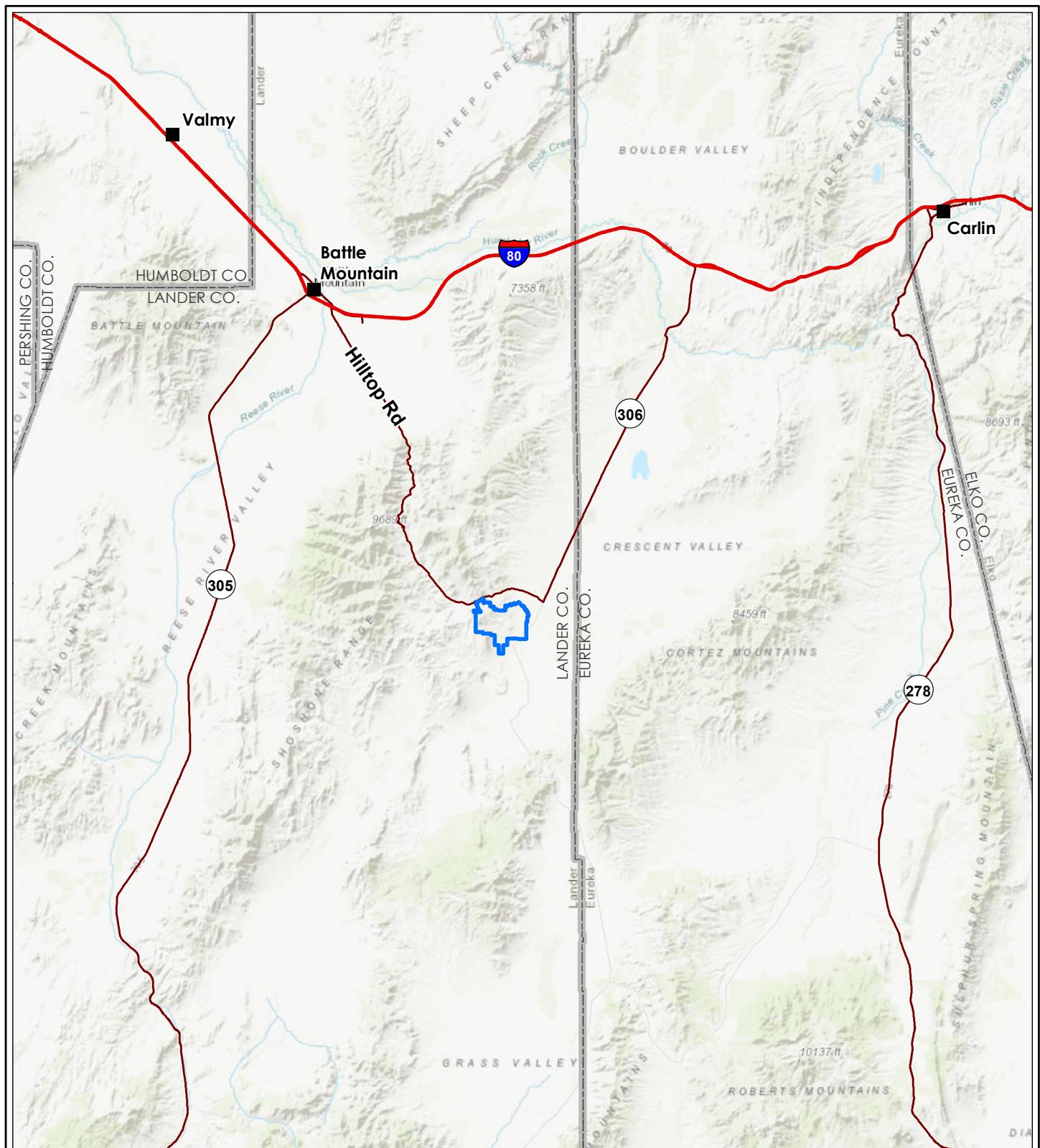
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## **FIGURES**

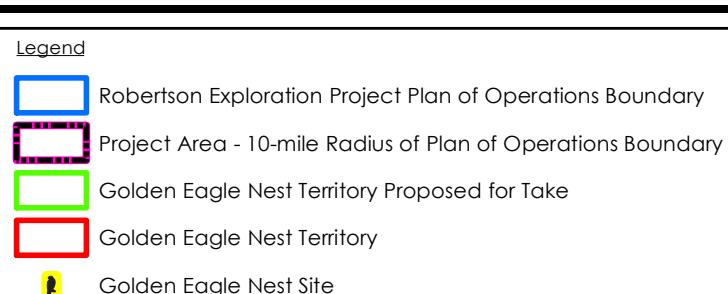
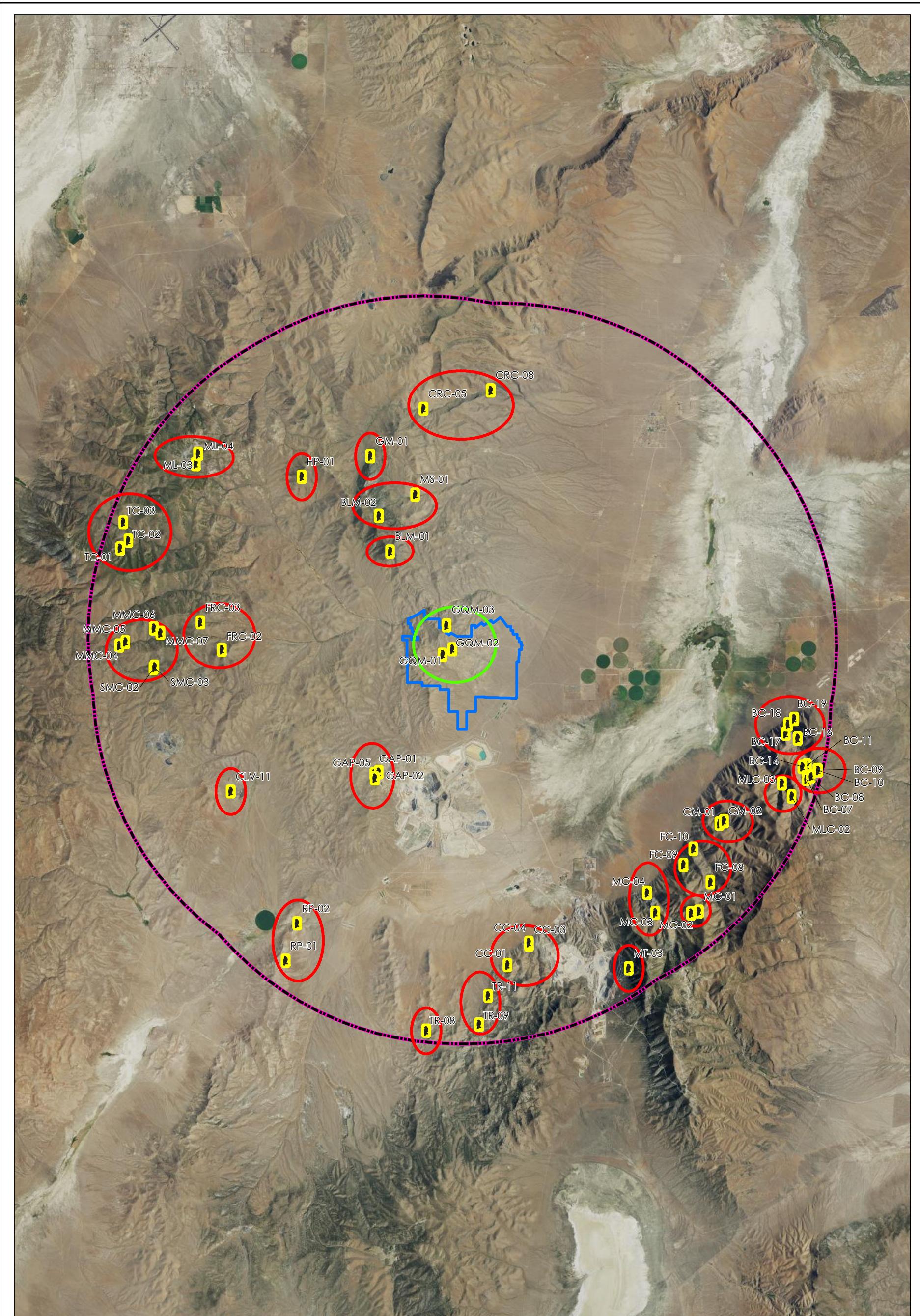


#### Legend

Robertson Exploration Project Plan of Operations Boundary

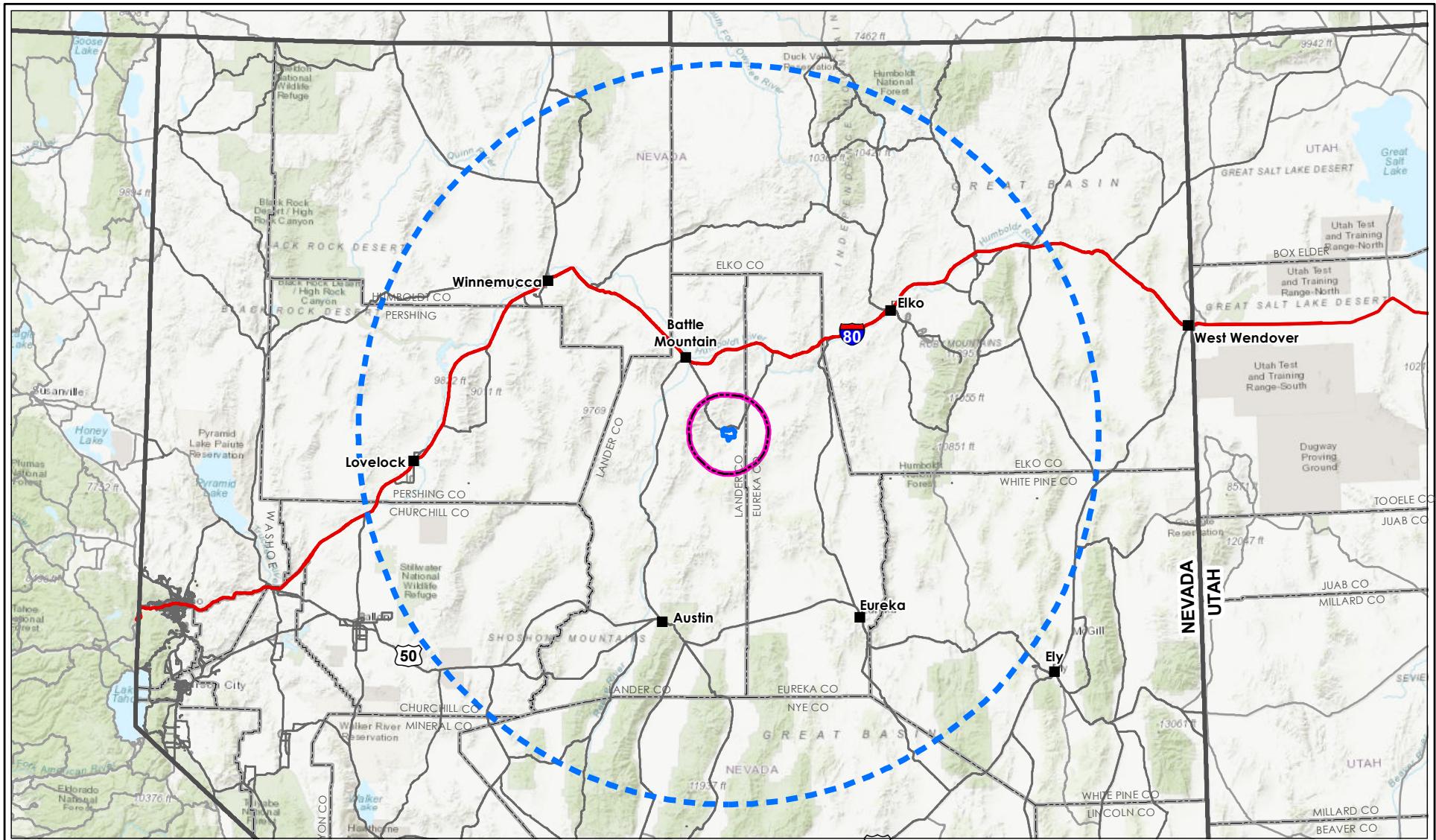
**Figure 1-1**  
**Project Location**  
**Robertson Exploration Project**  
**Environmental Assessment of**  
**Eagle Take Permit Application**

0 5 10 Miles



**Figure 3-1**  
**Golden Eagle Nests and Territories within a 10-mile Radius of the Robertson Exploration Project**  
**Roberston Exploration Project Environmental Assessment of Eagle Take Permit Application**

0 1.5 3 Miles



### Legend

- Robertson Exploration Project Plan of Operations Boundary
- Project Area - 10-mile Radius of Plan of Operations Boundary
- Cumulative Effects Study Area - 109-mile Radius of Plan of Operations Boundary

**Figure 4-1**  
**Cumulative Effects Study Area**  
**Robertson Exploration Project**  
**Environmental Assessment of**  
**Eagle Take Permit Application**

A horizontal number line with tick marks at 0, 20, and 40. The segment from 0 to 20 is shaded in gray. The word "Miles" is written to the right of the number line.

**APPENDIX A**

**ROBERTSON EXPLORATION PROJECT GOLDEN**

**EAGLE NEST MONITORING PLAN**

**GOLDEN EAGLE NEST MONITORING PLAN  
ROBERTSON PROJECT  
LANDER COUNTY, NEVADA**

*Prepared by:*

**Nevada Gold Mines LLC  
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1655 Mountain City Highway  
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July 19, 2019

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Figure 2	GQM Golden Eagle Nest Territory
Figure 3	GQM Nest Location Viewshed and Distance Analysis

## ACRONYMS AND ABBREVIATIONS

<b>BLM</b>	Bureau of Land Management
<b>dB</b>	Decibel
<b>ID</b>	Nest Identifier
<b>NDOW</b>	Nevada Department of Wildlife
<b>NGM</b>	Nevada Gold Mines LLC
<b>Plan</b>	Golden Eagle Nest Monitoring Plan
<b>Project</b>	Robertson Exploration Project
<b>USFWS</b>	United States Fish and Wildlife Service

# 1.0 INTRODUCTION

Nevada Gold Mines LLC (NGM) has prepared a golden eagle (*Aquila chrysaetos*) nest monitoring plan (Plan) for the Robertson exploration project (Project), based on potential future exploration activities in the vicinity of the GQM-01 golden eagle nest. NGM has contracted raptor nesting surveys since 2013 in the Cortez District; through multiple observations, GQM-01 nest's occupancy was been confirmed as in-use by golden eagles from 2015 through 2019.

Coordination with the Nevada Department of Wildlife (NDOW), Bureau of Land Management (BLM), and United States Fish and Wildlife Service (USFWS) regarding exploration drilling and proximity to the golden eagle nests occurred in 2019, and guidance was provided to NGM. This guidance has been incorporated into the Plan to provide a formalized approach to monitoring and reporting for the nesting season during proposed exploration activities. Specifically, this Plan outlines the nests to be surveyed, the frequency of monitoring, the specific data to be documented during monitoring, triggers for agency communications, specifics on which agencies are to be notified if monitoring triggers are met, and the required frequency of agency updates.

## 1.1 Project Description

Sporadic lode and placer mining have occurred in the vicinity of the Project by various entities since the first discovery of silver in 1873. The most recent period of mining ceased in 1989. NGM acquired the Project in 2017 and it is currently a mid-stage exploration project.

## 1.2 Project Location

The Project is located approximately 37 miles (42 kilometers) south of Interstate 80 in Lander County, Nevada (**Figure 1**). The Project can be accessed via Interstate 80 from Elko or Battle Mountain, by turning south at the Beowawe Exit onto Nevada State Highway 306. Both Interstate 80 and State Highway 306 are paved. From State Highway 306, it is 10 miles (16 kilometers) to the mine via County Road 225, which is a maintained gravel road.

## 2.0 BACKGROUND

### 2.1 Nesting Territory and Existing Monitoring Data

The GQM-01 nest is one of three nests thought to occur within the same golden eagle breeding pair's territory. The other two nests include GQM-02 and GQM-03. The nests within this cluster (**Figure 2**) are within 0.9 mile of each other and have not been simultaneously in use since being discovered during surveys in 2014. Two of the three nests in the cluster have alternated occupancy (GQM-01 and GQM-02) and occur within inactive mine pits. The next closest nests are BLM-01 located 2.9 miles to the northwest of GQM-03, and BLM-02, 4.0 miles to the northwest of GQM-03; both are thought to be part of separate territories that have been in use simultaneously. Available monitoring data for the nests within the GQM territory is provided in **Table 1**. Documentation of these nests within the NGM golden eagle monitoring dataset appears to have occurred in 2014 and 2015, though it is unknown if the nests existed prior to 2014. Of interest, is that the GQM-03 nest was reported as fallen during the 2018 surveys and was not found during the initial 2019 survey.

**Table 1 GQM Territory Monitoring Data 2013-2019**

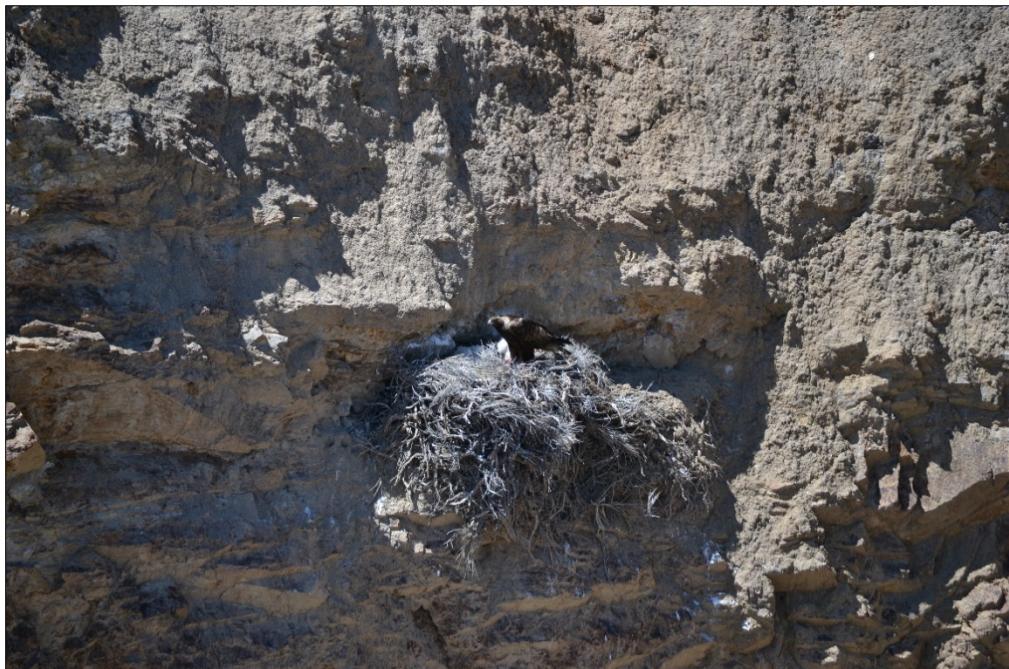
Nest ID	2013	2014	2015	2016	2017	2018	2019
GQM-01	Not included in 2013 report.	Reported as a golden eagle nest; 4/8/14 - no notes for observation; 5/7/2014 - Inactive, nest contents: empty; two old nests near each other, old material below nest; no photo	Reported as a golden eagle nest; 4/1 or 2/15 - no notes for observation; 5/5/15 - Active; at least one eaglet with down; 1 adult at nest; photo	Reported as golden eagle nest; Observed on April 1 or 2 and May 2 or 3, 2016; active, two eaglets; downy; photo	Reported as golden eagle nest; Observed April 11 or 12 and May 22 or 23, 2017; active; two nestlings fully feathered; no photo	Reported as golden eagle nest. February 14 or 15: Adult GOEA observed on nest; March 23 or 24: Two adult GOEA observed on nest; April 23 or 24: Two nests observed with adult GOEA and at least one young GOEA in nest. May 28: One young GOEA observed in nest; photos	Monitoring between February 4 and July 2 found the nest in-use by a pair of eagles; One egg observed in the nest, which resulted in one young fledged; photo
GQM-02	Not included in 2013 report.	Reported as a golden eagle nest; 5/7/14; Active; nest contents: two eaglets; downy feathers; one adult at nest, one adult nearby; no photo	Reported as an unknown species nest; 5/5/15 - inactive empty stick nest; photo	Reported an unknown species nest; observed on April 1 or 2, 2016, inactive empty nest; noted as old nest, destroyed; photo	Reported as unknown species nest; Observed May 22 or 23, 2017; inactive and empty; no photo	Reported as unknown species nest; February 14-15: Observed rocks fallen on nest, some sticks visible. No activity observed; March 23-24: Observed rocks fallen on nest, some sticks visible. No activity observed; April 23-24: Observed nest covered in dirt. No activity observed; photo	No activity observed during three flights in 2019; photo
GQM-03	Not included in 2013 report.	Not included in 2014 report	Reported as a golden eagle nest; 4/2/15 - inactive; old nest on rock outcrop; no photo	Reported as unknown species nest; Observed on April 1 or 2 and May 2 or 3, 2016; inactive and empty; noted as an old nest; photo	Reported as common raven nest; Observed April 11 or 12 and May 22 or 23, 2017; inactive and empty with material on the ground; no photo	February 14 or 15, March 23 or 24, April 23 or 24: Nest has fallen; photo	No nest present during three flights in 2019; photo

Note: Nest occupancy is noted with green highlighting

**Photograph 1** provides an example of the GQM-01 nest position on a bench within the pit high wall (taken in 2019) and **Photograph 2** provides a close-up of the nest (taken in 2016).



**Photograph 1 – GQM-01 Nest Position (2019)**



**Photograph 2 – Close-up of GQM-01 Nest (2016)**

## 2.2 Line-of-Sight, Distance, and Noise Analysis

To determine if the proposed drill targets are within line-of-sight of GQM-01, a viewshed analysis was created. This analysis used the ArcGIS Viewshed tool to create a layer showing visible and not visible areas from the nest location. It incorporated a digital elevation layer, the nest coordinates, and elevation (**Figure 3**).

For reference purposes, NGM collected noise data for the same type of drill rigs (Atlas Copco CT-14 Christensen Surface Core drilling rig or similar) that would be used during future drilling at the Project. A Quest Sound Pro Sound Level Meter was calibrated in the office per manufacturer specifications immediately prior to field noise readings. This analysis showed that when standing 20 feet from the drill rig, while it was under normal drilling operations, the decibel (dB) reading was 81.7 dB. When standing 0.25 miles (or 1,320 feet) the reading was 55.3 dB.

## 2.3 Agency Coordination

Based on the GQM-01 nest's 2019 occupancy and the Project's proposed drilling program, NGM initiated agency coordination to determine an acceptable path forward. This coordination was initiated in late-March 2019 and included NDOW, BLM, and USFWS. The line-of-sight, distance, and noise analysis information was shared with these agencies at that time.

The NDOW and USFWS drafted a monitoring approach that would allow for NGM to proceed with their drilling program with certain cautionary activities and detailed monitoring. The provided language stated the following:

"If the proponent desires to move forward (with or without a permit application) with the drilling during the active nesting, NDOW and USFWS would like the proponent to consider an adaptive management approach with active nest monitoring during all daylight hours, all days of the week, between now and when the young reach 3 weeks of age (likely around mid-May). The nest monitor would document activities at the nest including arrivals and departures of each adult, prey deliveries, time incubating/directly on nest, time incubating/brooding and overall time on the nest, bird response to any particularly loud noises (do the birds respond differently when a drill rig starts up or stops, the vans arrive/depart, etc.), etc. This option would allow the proponent to initiate drilling any time (but does not replace the legal protection provided by a take permit). It would be important to start the drilling furthest away from the nest and out of the viewshed, working the way in and leaving the closest and within viewshed holes until much later in nesting or after fledging (preferred). The nest monitor would be expected to notify the proponent, NDOW, USFWS, and BLM immediately if any of the birds activities indicate less time and care at the nest (e.g., less than 2-3 prey deliveries/day, the nest being unattended for more than 3-6 hours, etc. – and these would need to be better fleshed out beforehand) and it would be wise for the proponent to cease activities at that point, unless an eagle take permit is in hand. This scenario could trigger additional discussions of options with the agencies, unless an application for a take permit is already in place. If all is still going well at the 3-week post-hatch mark, the agencies and proponent would reconvene (conference call?) and consider scaling back on the nest monitoring until after the post-fledging nest

dependency period. Brief bi-weekly updates to all of the agencies would be expected throughout this process (could be email) and a final report summarizing the birds' activities and how those related to the drilling activities would be expected by the end of August."

## 3.0 MONITORING METHODS

When proposed exploration and drilling actives are scheduled to occur during the golden eagle nesting season, within a one-mile radius of GQM-01, and while GQM-01 is considered to be in-use by golden eagles, the following monitoring will be implemented.

### 3.1 Frequency and Timing

Hatch and Age Determination Monitoring: Monitoring to determine approximately when hatching occurs and when young reach three weeks of age will occur for planning and coordination purposes. This monitoring will occur twice-weekly for approximately one month.

Drilling Monitoring: Drilling would start at the drill locations farthest from the nest and outside of the viewshed, progressing inward toward the nest. Upon completion of the drill locations outside of the viewshed, drilling would start at the drill locations farthest from the nest within the viewshed, progressing inward toward the nest.

During the first fourteen days after the young reach three weeks of age, daily monitoring (from sunrise to sunset) will occur. Near the completion of the 14-day monitoring, NGM will coordinate closely with the agencies to determine the adequacy of current monitoring and potential applicability of modified monitoring efforts. Based on the results of those communications, monitoring will proceed at the specified frequency, duration, and methodologies determined appropriate at that time. It's anticipated that the nest will be monitored twice-weekly (back-to-back days from sunrise to sunset) when the young is between five and eight weeks of age, and then once weekly when the young is about eight weeks of age until the young no longer display dependency to the nest site.

### 3.2 Data to be Collected

Documentation: Two datasheets will be completed by biologists daily during monitoring including a Golden Eagle Nest Report Form and a second data sheet to record activities observed at specific times (**Appendix A**). Specific documentation will include, but is not limited to, the following:

- Noting arrivals and departures of each adult,
- Noting prey deliveries (number per day, time between, etc.),
- Noting time incubating/directly on nest,
- Noting time incubating/brooding and overall time on the nest,
- Bird response to any particularly loud noises (i.e., do the birds respond differently when a drill rig starts up or stops, when the vans arrive/depart, etc.).

### 3.3 Thresholds and Notifications

During daily monitoring, the thresholds that will trigger immediate (within the same day) email communications with NGM, NDOW, BLM, and USFWS will include the following:

- If any of the birds' activities indicate less time and/or care at the nest. For Example:
  - If during the first 14 days of consecutive monitoring (young are approximately three to five weeks old):
    - 1) a day goes by without a prey delivery observed, or
    - 2) the nest is unattended greater than three hours consecutively or greater than six hours cumulatively in a given monitoring day, or
  - If for about two weeks after the 14 days of consecutive monitoring (young are approximately six to seven weeks old), the nest is unattended greater than six hours consecutively or greater than 11 hours cumulatively in a given monitoring day, or
  - If after the 14 days of consecutive monitoring through fledging (young are approximately six weeks old through fledging), no prey deliveries are observed in a given day of monitoring, followed by a second consecutive day of monitoring that finds no prey deliveries made.

Note that additional details and/or triggers may be determined through agency coordination, prior to the initiation of daily monitoring, or during the field if biologists make observations that they feel warrants concern.

Threshold trigger communications will be sent to the following recipients:

NGM: Steve Schoen ([sschoen@nevadagoldmine.com](mailto:sschoen@nevadagoldmine.com)), and  
William Irish ([wirish@nevadagoldmines.com](mailto:wirish@nevadagoldmines.com))

BLM: Elin Pierce ([epierce@blm.gov](mailto:epierce@blm.gov)),  
Rachelle Peppers ([rpeppers@blm.gov](mailto:rpeppers@blm.gov)), and  
Scott Distel ([sdistel@blm.gov](mailto:sdistel@blm.gov))

NDOW: Lindsey Lesmeister ([llesmeister@ndow.org](mailto:llesmeister@ndow.org)),  
Mackenzie Jeffress ([mrjeffress@ndow.org](mailto:mrjeffress@ndow.org)), and  
Joe Barnes ([jbarnes@ndow.org](mailto:jbarnes@ndow.org))

USFWS: Stephen Fettig ([stephen\\_fettig@fws.gov](mailto:stephen_fettig@fws.gov))

### 3.4 Bi-Weekly Communications

Routine email updates will be provided once every two weeks to NGM and agency representatives identified above. These will be applicable from the period that drilling initiates through either the cessation of drilling or the determination that young are no longer dependent on the nest site, whichever comes first.

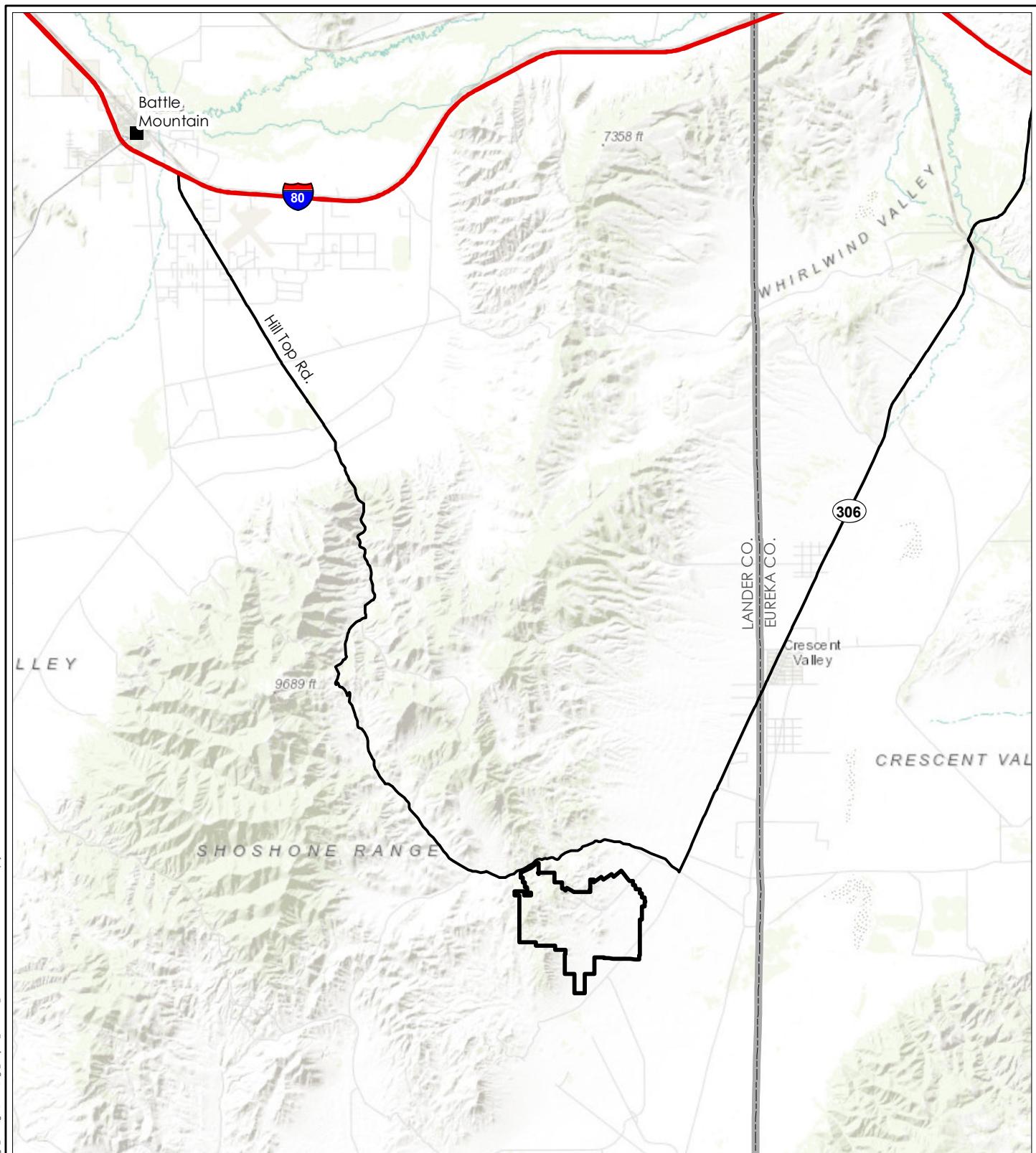
These communications will include the following details:

- What drilling activities are taking place;
- When monitoring took place;
- A summary of what the nest status;
- A determination on what the estimated age of the young;
- A photo of the nest; and
- Any other behavioral monitoring notes that may be of interest.

## **4.0 REPORTING**

Once monitoring has been completed, determined by either the cessation of drilling during the nesting period, a determination that the eagles are no longer dependent upon the nest for the breeding season or a determination that the eagles have abandoned the nest, a final report will be drafted. The report will provide a summary of drilling activities, all nest monitoring activities that occurred, and eagle behavior. Nest forms and photographs collected throughout the monitoring will be included within the report. The report will be submitted to NDOW, BLM, and USFWS no later than August 31 of each year when monitoring occurs.

## **FIGURES**



#### Legend

Robertson Plan of Operations Boundary



0 2 4 Miles

1 in = 4 miles

T28N, R47E Lander County, NV  
NAD 1983 UTM Zone 11N

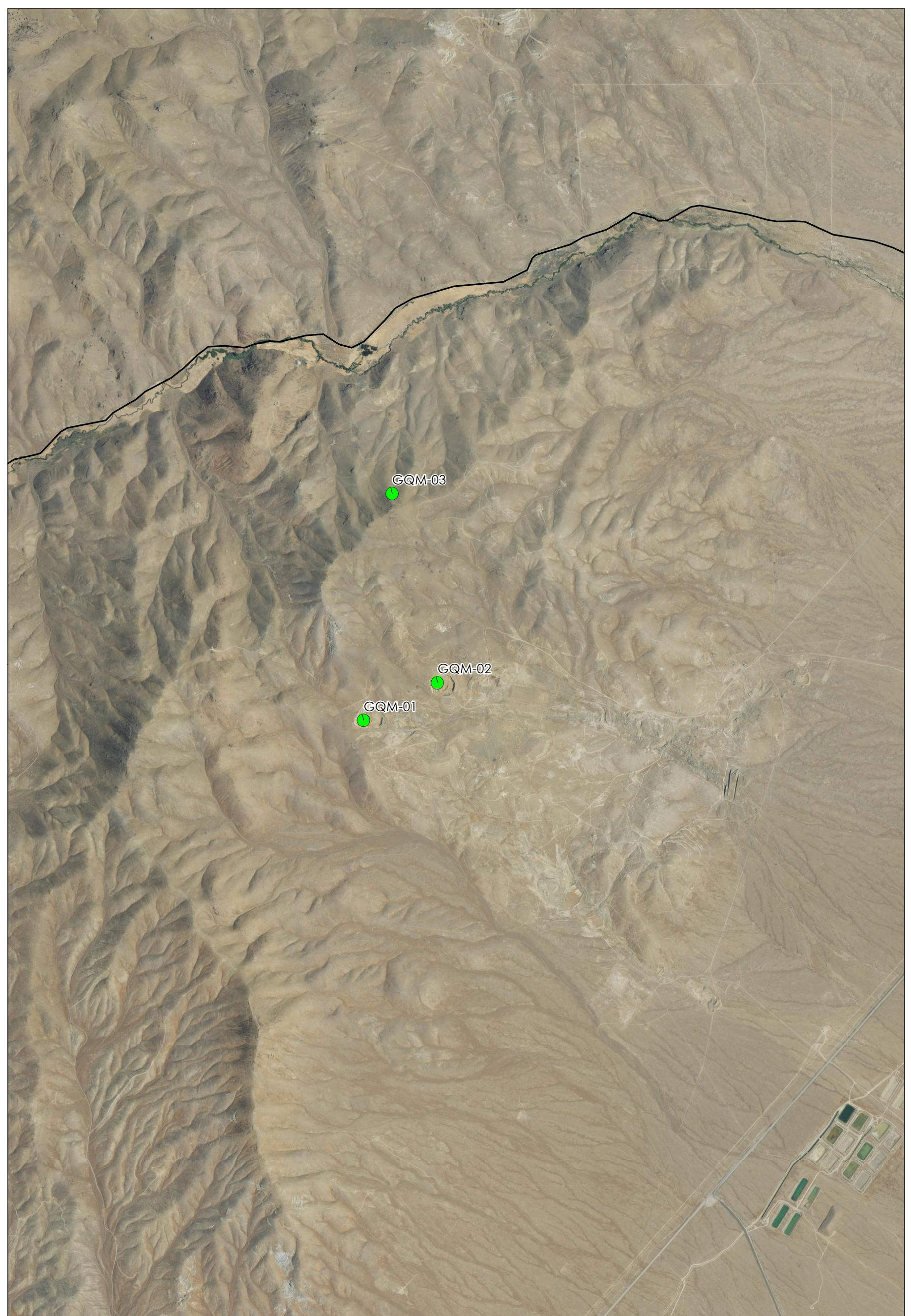
DRAWN BY: JT 1ST REVIEW: CJ 2ND REVIEW: JV

DATE: 4/11/2019

PROJECT NO: 2037XXXX

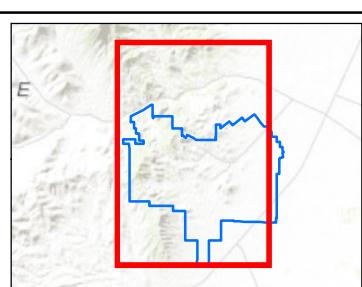
Nevada Gold Mines LLC  
Robertson Project  
GQM-01 Golden Eagle Nest  
Monitoring Plan

#### Figure 1 Project Location



**Legend**

● Golden Eagle Nest



0 1,000 2,000  
Feet  
1 in = 2,000 feet

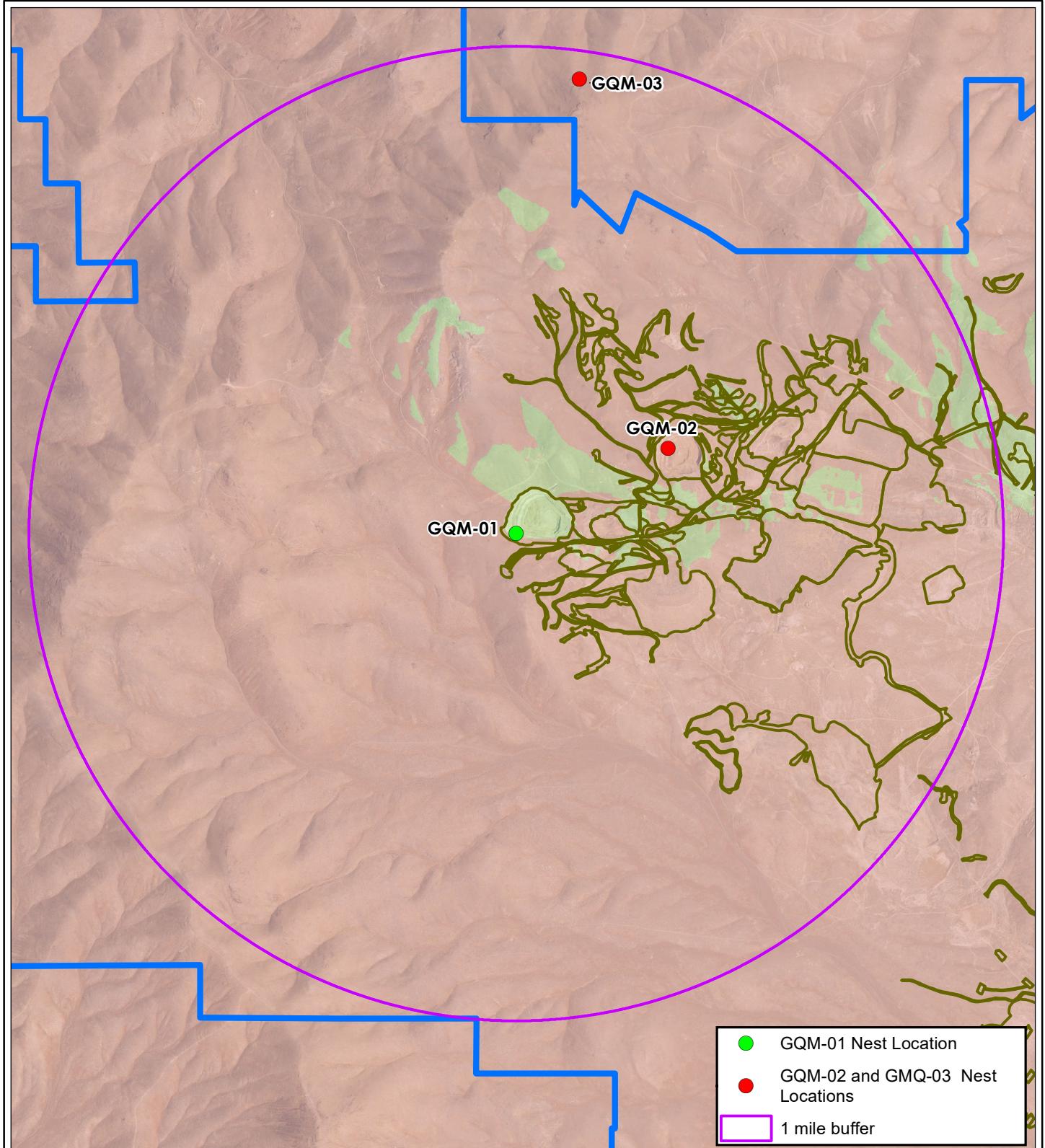
Eureka and Lander County, NV  
NAD 1983 UTM Zone 11N

DRAWN BY: JT 1ST REVIEW: CJ 2ND REVIEW: DE

DATE: 4/12/2019 PROJECT NO: 203720556

Nevada Gold Mines LLC  
Robertson Project  
GQM-01 Golden Eagle Nest  
Monitoring Plan

**Figure 2**  
**GQM Golden Eagle Territory Nests**



Legend
Robertson Mine Plan of Operations (Plan) Boundary
Existing Facilities
Not Visible
Visible



0 740 1,480 Feet

1 in = 1,500 feet

Eureka & Lander County, NV  
NAD 1983 UTM Zone 11N

DRAWN BY: CJ 1ST REVIEW: JT 2ND REVIEW: DE

DATE: 5/23/2019

PROJECT NO: 203721232

Nevada Gold Mines LLC  
Robertson Project

**Figure 3**  
**GQM-01 Nest Location**  
**Viewshed Analysis**

**APPENDIX A**

**Golden Eagle Nest Report Forms**

## Golden Eagle Nest Report Form

<b>Observation Method:</b> <input type="checkbox"/> <b>Ground</b> <input type="checkbox"/> <b>Helicopter</b>	<b>Observation Date:</b> _____ <b>Site Name:</b> _____
<b>Start Time:</b> _____ <b>End Time:</b> _____ <b>Duration of Obs:</b> _____	<b>Breeding Area Number:</b> _____ <small>(From annual report, or to be assigned if new this year)</small>
<b>Weather (circle best descriptions):</b> Temperature Range: _____ Precipitation: Dry, Fog, Misty Rain, Rain, Sleet/Hail, Snow. <b>Wind:</b> Calm, Gusty, Light, Moderate, Windy <b>Wind Direction:</b> Variable <b>or From:</b> N, NE, E, SE, S, SW, W, NW <b>Visibility:</b> Excellent, Good, Fair, Poor <b>Do you think weather or lighting had a negative effect on your observation?</b> Yes, No	<b>Nest Number(s):</b> _____ <small>(From annual report, or to be assigned if new this year)</small> <b>Primary Observer Name:</b> _____  <b>Affiliation:</b> _____ <b>Phone Number:</b> _____ <b>Email:</b> _____ <b>Other Observers:</b> _____
<b>Photo numbers:</b> _____  <b>Obs. Point &amp; Nest Locations</b> (We request NAD83 or UTM. Please note if using another format.) <b>Obs. Point Coordinates:</b> <b>Datum:</b> _____ <b>Northing:</b> _____ <b>Easting:</b> _____ <b>Bearing &amp; Distance to Nest</b> (Magnetic or True North?): _____ <small>(Record any additional Observation Point locations, and bearings, distance &amp; distance units to nest(s) in Note field.)</small>	
<b>Note:</b> _____   <b>Nest Coordinates</b> (for the nest that is being used): Estimated, Actual <b>Datum:</b> _____ <b>Northing:</b> _____ <b>Easting:</b> _____ <b>Access Directions</b> (provide details if access is complicated by unmarked roads or private property):   	
<b>White Wash:</b> circle as appropriate <b>Yes/No</b> <b>Light</b> <b>Moderate</b> <b>Heavy</b> <b>Comments:</b> _____ <b>Do you suspect the eagles are using an unseen nest?</b> Yes, No, Maybe <b>Mapping done?</b> Yes, No <b>Photo?</b> Yes, No <b>Sketch?</b> Yes, No <small>(Please attach maps, sketches or photos to the field form. Items of interest include nest &amp; perch locations, flight paths.)</small>	
<b>Observation Information</b> <b>Number of Breeding Adults:</b> _____ <b>Total # of Golden Eagles:</b> _____ <b>Estimated?</b> Yes, No <b>Nest Substrate:</b> Cliff, Tree, Other Nest Structure (if manmade structure, describe on next line) <b>Nest Substrate Note:</b> _____ <b>Tree Species:</b> _____ <b>Tree Is:</b> Alive, Dead-Topped, Dead <b>Other Species at Cliff</b> (circle): American Kestrel, Bald Eagle, Bighorn Sheep, Great Horned Owl, Peregrine Falcon, Prairie Falcon, Raven, Red-tailed Hawk, Turkey Vulture- Other (explain in notes) <b>Were eagles disturbed by human activities?</b> Yes, No <b>If so, explain in notes.</b> <b>Field Notes</b> (describe what you saw here or attach copies of original field notes):        	

(Continue Field Notes on back/page 2 at bottom)

## **Golden Eagle Nest Report Form**

## GOLDEN EAGLE DETAILS

(Please use appropriate values from the lists provided.)

**Look for leg bands or other markers on each eagle and include details in notes if observed.**

**Adults & Subadults:** Age = Adult or Subadult/Gender = Female, Male or Unknown

**Activities:** Aggression at Another GE or Other Species, Brooding Position, Copulation, Delivering Prey, Disturbed, Drinking, Eating, Feeding Young, Flying, Hunting, Incubating Position, Nestbuilding, Perching, Standing on Nest, Vocalizing, Other (explain in notes).

Standing on Rock, Feeding, Ch. 3. (explain in notes)			
	Age	Gender	Primary Activity (describe other activities in notes)
Eagle 1			
Eagle 2			
Eagle 3			
Eagle 4			

If more than 4 (excluding nestlings), describe additional eagles in notes.

**Nestlings:** If nestling(s) observed, age according to the following Age Guide (from Hoechlin 1976):

- 0-7 days - Short grayish-white down.
- 8-14 days - Long wooly white down developing.
- 15-21 days - Long wooly white down nearly complete.
- 22-28 days - Pin feathers begin to show as dark spots on edges of wings and tail.
- 29-35 days - Body evenly mottled dark and white; head and neck white.
- 36-42 days - Body nearly feathered (dark) except for head and legs.
- 43-49 days - Body nearly feathered and head partly feathered.
- 50-56 days - Feathers nearly complete; tufts of down on head.
- 57-63 days - Feathers complete; "golden" hackles and white at base of tail visible.
- 64+ days - Feathered and ready to fledge

**Nestling Activities:** Aggression at Sibling, Begging, Being Fed, Eating, Flapping, Flapping & Hopping, Lying on Nest, Perched out of Nest, Standing on Nest, Vocalizing, Other (explain in notes).

Lying on Nest, Perched out of Nest, Standing on Nest, Vocalizing, Other (explain in notes)		
Age	Primary Activity (describe other activities in notes)	
Nestling 1		
Nestling 2		
Nestling 3		

Do you suspect there could be more nestlings than were observed? Yes. No

## Golden Eagle Nest Report Form

### Golden Eagle Nest Monitoring Codes

Codes (underlined) and definitions used to categorize results of monitoring golden eagle nests.

These codes are suggestions, you may write out what you observed if your situation does not fit within these categories.

NS = NOT SURVEYED

UNOC = UNOCCUPIED - Nest present, but no breeding-age eagles detected.

Also called inactive, these nests have little to no whitewash or have not been maintained.

UNOX = POSSIBLY UNOCCUPIED - Not enough information to be certain; outcome unknown; also used for: repaired nest but no eagles.

VAC=VACANT- a nest that appears to have prolonged inactivity, such as decomposed sticks, few sticks, majority of sticks below the nest, etc

ACT=ACTIVE – a nest or outcrop with moderate to heavy amounts of whitewash indicating avian activity. Nest embellishments such as greenery or new sticks may also indicate an active nest. An active nest may or may not have been used within the past year for reproduction such as egg laying; however, whitewash is an indicator of active use by birds.

OCCX = OCCUPIED - Breeding-age eagle(s) observed on or near nest, eggs, or young seen in nest; outcome unknown.

OCEF = OCCUPIED, EVIDENCE OF EGGS, FAILED - Evidence of egg(s), but no young.

OCES = OCCUPIED, EVIDENCE OF EGGS & SUCCESS - Evidence of fledged young, no young observed. OR/

OCES 1 = SUCCESSFUL, 1 YOUNG - Nestling less than 7 weeks old, or older  
(use classifications pg. 2)

OCES 2 = SUCCESSFUL, 2 YOUNG - One or both nestlings less than 7 weeks old or older.

OCES 3 = SUCCESSFUL, 3 YOUNG - At least one nestling less than 7 weeks old or older.

## GQM-01 Nest Monitoring Datasheet

Biologist Name:

Date:

## **APPENDIX B**

### **PROJECT AREA GOLDEN EAGLE TERRITORIES AND OCCUPANCY STATUS SUMMARY**

## Appendix B Project Area Golden Eagle Territories and Occupancy Status Summary

Annual golden eagle aerial and ground surveys have been conducted in the vicinity of the Project from 2013 to present. The total number of nests surveyed has increased annually from 2013 to 2018, which is attributed to expanding survey areas and survey effort. The 2013 through 2016 data accounts for only a portion of the nests within ten miles of the Project because these surveys were conducted for adjacent projects; however, these survey areas overlap a portion of the Project area. A 10-mile buffer survey of the Project was formally established in 2017 and has continued through 2019. A summary of golden eagle nest survey data for nests within 10 miles of the Project from 2013 to 2019 is presented in **Table 1-1**.

**Table 1-1 Summary of Nest Surveys from 2013 to 2019**

Year	2013	2014	2015	2016	2017	2018	2019 <sup>3</sup>
Total Golden Eagle Nests	6	25	39	53	55	57	39
Occupied <sup>1</sup> Golden Eagle Nests	1	7	9	9	10	14	8
Unoccupied <sup>2</sup> Golden Eagle Nests	5	18	30	44	45	43	31

<sup>1</sup> Occupied Nest – A nest used for breeding in the current year by a pair.

<sup>2</sup> Unoccupied Nest – Those nests not selected by golden eagles for use in the current nesting season.

<sup>3</sup> This value represents those nests that could actually be located in 2019. The total number of known nests is 55.

Note: Of the 24 territories delineated, the survey area and methods are only consistent for the Project area for 2017 through 2019 data.

Source: Stantec 2019

In addition, the golden eagle nesting territories within the 10-mile radius of the Project were delineated based on the 2013 through 2019 dataset. A total of 24 distinct territories were delineated based on proximity of nests to one another, concurrent occupancy of adjacent nests, alternating occupancy (from year to year) of adjacent nests, and nearest available quality nesting substrate obtained from surveys and monitoring at the Project. Of the territories delineated, one was occupied in 2013, seven in 2014, nine in 2015, nine in 2016, 10 in 2017, 14 in 2018, and eight in 2019. **Figure 3-1** displays the 24 golden eagle nesting territories relative to the Project area and **Table 1-2** summarizes the golden eagle territories and occupancy status within the Project area.

**Table 1-2 Territories within the Project Area and Status**

Territory	Nest ID	Location (UTMs)		Year and Status						Number of Seasons Territory was Occupied	Territory Occupancy Rate	Territory Average Brood Size (Fledged Young per Occupancy)	
		Easting	Northing	Territory Status			2019	2018	2017	2016	2015		
1	BC-07	543631	4455968	Occupied	Unoccupied	Occupied	Unoccupied	Unoccupied	Unoccupied	Occupied	Occupied	4	0.57
	BC-08	543850	4456106		Occupied	Unoccupied	Unoccupied	Occupied	Occupied	Unoccupied	Unoccupied		
	BC-09	544179	4456424		Unoccupied	Occupied	Occupied	Occupied	Occupied	Occupied	Occupied		
	BC-10	544229	4456404		Occupied	Unoccupied	Occupied	Occupied	Occupied	Occupied	Occupied		
	BC-11	543641	4456657		Occupied	Occupied	Occupied	Occupied	Occupied	Occupied	Occupied		
	BC-14 (2 nests)	543413	4456594		Unoccupied	Occupied	Occupied	Occupied	Occupied	Occupied	Occupied		
2	BC-16	543166	4458046	Unoccupied	Occupied	Occupied	Occupied	Occupied	Occupied	Occupied	Occupied	4	0.57
	BC-17	542560	4458286		Occupied	Occupied	Occupied	Occupied	Occupied	Occupied	Occupied		
	BC-18	542681	4458770		Occupied	Occupied	Occupied	Occupied	Occupied	Occupied	Occupied		
	BC-19	542995	4459052		Occupied	Occupied	Occupied	Occupied	Occupied	Occupied	Occupied		
3	BLM-01	522309	4467619	Occupied	Unoccupied	Unoccupied	Unoccupied	Unoccupied	Unoccupied	Unoccupied	Unoccupied	2	0.40
4	BLM-02	521740	4469432		Unoccupied	Unoccupied	Unoccupied	Unoccupied	Unoccupied	Unoccupied	Unoccupied		
	MS-01 (2 nests)	523588	4470532		Unoccupied	Unoccupied	Unoccupied	Unoccupied	Unoccupied	Unoccupied	Unoccupied		
5	CC-01	528314	4446452	Unoccupied	Unoccupied	Unoccupied	Unoccupied	Unoccupied	Unoccupied	Unoccupied	Unoccupied	1	0.16
	CC-03	529412	4447485		Unoccupied	Unoccupied	Unoccupied	Unoccupied	Unoccupied	Unoccupied	Unoccupied		
	CC-04	529413	4447586		Unoccupied	Unoccupied	Unoccupied	Unoccupied	Unoccupied	Unoccupied	Unoccupied		

Territory	Nest ID	Location (UTMs)		Year and Status						Number of Seasons Territory was Occupied	Territory Occupancy Rate	Territory Average Brood Size (Fledged Young per Occupancy)
		Easting	Northing	2019	2018	2017	2016	2015	2014			
6	CLV-11	514153	4455333	Unoccupied	Unoccupied	Unoccupied	Unoccupied	Unoccupied	Unoccupied	2	0.50	0
7	CM-01	539166	4453691	Occupied	Occupied	Occupied	Occupied	Occupied	Occupied	5	0.83	1
	CM-02	539399	4453820	Unoccupied	Occupied	Occupied	Occupied	Unoccupied	Unoccupied	3	0.60	1.67
8	CRC-05	524018	4474923	Occupied	Occupied	Unoccupied	Unoccupied	Unoccupied	Unoccupied	0	0	--
	CRC-08 (3 nests)	527459	4475862	--	Occupied	Occupied	Occupied	Unoccupied	Unoccupied	0	0	--
9	FC-08	538706	4450684	--	--	Unoccupied	Unoccupied	Unoccupied	Unoccupied	3	0.43	0
	FC-09	537327	4451569	--	--	Unoccupied	Unoccupied	Unoccupied	Unoccupied	--	--	--
	FC-10	537827	4452399	--	--	Unoccupied	Unoccupied	Unoccupied	Unoccupied	--	--	--
10	FRC-02	513696	4462577	--	--	Unoccupied	Unoccupied	Unoccupied	Unoccupied	--	--	--
	FRC-03	512597	4463989	--	--	Occupied	Occupied	Occupied	Occupied	--	--	--
11	GAP-01	521499	4456230	--	--	Unoccupied	Unoccupied	Unoccupied	Unoccupied	--	--	--
	GAP-02	521726	4456325	--	--	Occupied	Occupied	Occupied	Occupied	--	--	--
	GAP-05	521525	4456012	--	--	Unoccupied	Unoccupied	Unoccupied	Unoccupied	--	--	--

Territory	Nest ID	Location (UTMs)		Year and Status		Number of Seasons Territory was Occupied	Territory Occupancy Rate	Territory Average Brood Size (Fledged Young per Occupancy)
		Year	Status	Year	Status			
12	GM-01	521299	4472495	2019	Occupied	2	0.67	0
13	GQM-01 (2 nests)	525018	4462372	2018	Occupied	6	1.0	1.5
	GQM-02	525495	4462615	2017	Unoccupied	1	0.20	1
	GQM-03	525203	4463835	2016	Occupied	0	0	1
14	HP-01	517783	4471443	2015	Unoccupied	4	0.67	1.25
15	MC-01	538111	4449189	2014	Occupied	2	0.40	2
	MC-02	537714	4449096	2013	Occupied	2	0.67	1
16	MC-03	535885	4449117	2012	Occupied	2	0.67	1
	MC-04	535465	4450145	2011	Occupied	2	0.67	1
17	ML-03	512365	4472093	2010	Unoccupied	2	0.40	2
	ML-04	512485	4472610	2009	Unoccupied	2	0.67	1

Territory	Nest ID	Location (UTMs)		Year and Status				Number of Seasons Territory was Occupied	Territory Occupancy Rate	Territory Average Brood Size (Fledged Young per Occupancy)			
		Easting	Northing	Territory Status									
				2019	2018	2017	2016						
18	MLC-02	542866	4455083	Occupied	Occupied	Unoccupied	Unoccupied	4	0.67	1.5			
	MLC-03	542366	4455746		Occupied	Unoccupied	Occupied						
19	MMC-04 (2 nests)	508446	4462799	Unoccupied	Occupied	Unoccupied	Occupied	3	0.60	0.67			
	MMC-05	508756	4462983										
	MMC-06 (2 nests)	510217	4463681										
	MMC-07	510550	4463451										
	SMC-02	510198	4461637										
	SMC-03	510250	4461713										
20	MT-03	534523	4446278	Occupied	Unoccupied	Occupied	Unoccupied	0	0	--			
21	RP-01	516959	4446668										
	RP-02 (2 nests)	517548	4448579										
22	TC-01	508488	4467773		Unoccupied	Occupied	Unoccupied	4	0.80	0.5			
	TC-02 (2 nests)	508908	4468173										
	TC-03	508647	4469115										
23	TR-08	524159	4443084	--	--	--	--	1	0.17	0			

Territory	Nest ID	Location (UTMs)		Year and Status							Number of Seasons Territory was Occupied	Territory Occupancy Rate	Territory Average Brood Size (Fledged Young per Occupancy)			
		Easting	Northing	2013	2014	2015	2016	2017	2018	2019						
Territory Status																
24	TR-09	526862	4443411	1	Occupied	Occupied	Unoccupied	Unoccupied	Occupied	Unoccupied	3	0.50	0			
	TR-11	527324	4444873													
<b>Total Number Territories</b> (Sum of all territories)				3	13	21	23	24	24	23 <sup>3</sup>						
<b>Total Number of Nests</b> (Sum of all nests)				6	25	39	53	54	54	55						
<b>Total Number of Occupied (In Use) Territories</b> (Sum of all occupied territories)				1	7	9	9	10	14	8						
<b>Territory Occupancy Rate</b> (Total number of occupied [in-use] territories divided by total number of territories)				0.33	0.54	0.43	0.39	0.42	0.58	0.35						
<b>Total Number of Fledged Young</b> (Sum of young fledged from all territories)				1	8	5	8	13	14	6						
<b>Fledged Young per Occupied Territory</b> (Total number of young divided by total number of occupied territories)				1	1.14	0.56	0.89	1.3	1	0.75						

Note: Of the 24 territories delineated, the survey area and methods are only consistent in the Project area for 2017 through 2019 data.

<sup>1</sup> These data not included in occupancy and productivity metrics calculation.

<sup>2</sup> Years with no occupancy not included in brood size metrics calculation.

<sup>3</sup> The MT-03 nest, which constitutes a single territory, could not be located during 2019 surveys; however, it is unknown if it was occupied so has been left out of 2019 calculations.

Of the 24 territories delineated, the survey area and methods are only consistent in the Project area for 2017 through 2019 data. In 2017, 10 territories are thought to have fledged young; 14 young are thought to have fledged in 2018; and eight young are thought to have fledged in 2019. The number of fledged young in the Project area has ranged from six to 14 between 2017 and 2019, with an average annual productivity of 1.02 and a range from 0.75 to 1.3 fledged young per occupied (in-use) territory. This falls within values documented for other golden eagle populations., as McIntyre (2002) reports a fledglings per occupied territory rate from 1988 to 1999 of 0.16 to 1.16.

The occupancy rates for 2017 through 2019 ranged from 35 to 58 percent. This range in occupancy rates is generally consistent when compared to the values presented by Steenhof et al. (1997), which was 38 to 100 percent, and McIntyre and Adams (1999), which was 33 to 90 percent.

## **APPENDIX C**

# **RESULTS OF GOLDEN EAGLE LOCAL AREA POPULATION ANALYSIS FOR ROBERTSON MINE NEST DISTURBANCE PERMIT APPLICATION**

Appendix C. Results of the golden eagle local area population (LAP) analysis for Robertson Exploration nest disturbance permit application. (Updated after public comment period with issuing of permit 90099B.)

**Focal Project: Robertson Mine Exploration**

<b>Predicted eagle take (annual)</b>	<b>0.59</b>
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**Local Area Population (LAP) Estimates by Local Area Density Unit (LADU):**

<b>Focal Project Density Unit</b>	<b>Estimated Number of Eagles</b>
Robertson Mine Exploration_GREAT_BASIN	787.07
<b>Robertson Mine Exploration LAP (total)</b>	<b>787.07</b>

1% LAP Benchmark	7.87
5% LAP Benchmark	39.35

**Permitted Projects with Overlapping LAPs:**

<b>Project ID</b>	<b>Estimated Annual Take</b>	<b>Percent Overlap With Focal Project</b>	<b>Overlapping Area (SqMi)</b>	<b>Overlapping Take</b>
Project 90099B	0.59	38.19%	14,243.57	0.23
<b>All Projects (total)</b>	<b>0.59</b>	<b>38.19%</b>	<b>14,243.57</b>	<b>0.23</b>

**Pending (reasonably foreseeable) Eagle-Permit Applications in the LAP:**

<b>Pending Project ID</b>	<b>Estimated Annual Take</b>	<b>Percent Overlap With Focal Project</b>	<b>Overlapping Area (SqMi)</b>	<b>Overlapping Take</b>
Project 20776D	0.59	34.92%	13,024.58	0.21
<b>All known pending Applications (total)</b>	<b>0.59</b>	<b>34.92%</b>	<b>12,024.58</b>	<b>0.21</b>

### Know Unpermitted Take Summary

Golden Eagle	All Known	Reported Years
Electrocution	89	1993-2019
Unknown	72	2011-2019
Shot	8	2012-2014
Collision with vehicle	6	2002-2016
Collision with wind turbine	6	2012-2015
Other	6	2014-2017
Trauma	4	1994-2015
Collision with wire	4	2014-2018
Emaciation;Starvation	3	2003-2014
Determination pending	2	2014-2015
Disease	2	2006-2008
Emaciation;Trauma	1	2014-2014
Emaciation	1	2017-2017
Trauma;Poisoned (pesticide)	1	2014-2014
Collision/electrocution	1	2018-2018
Total =	207 eagles	26 years
Annual average =	7.96 eagles/year	

Cumulative Take Results	Number of Eagles (Annual)	Percent of LAP
<b>Permitted Take</b>		
Total Overlapping Take	0.23	0.029%
Focal Project Predicted Take	0.59	0.075%
<b>Total Permitted Take (Focal Project + Total Overlapping Take)</b>	<b>0.82</b>	<b>0.10%</b>
Pending Applications	0.21	0.03%
Unpermitted Take	7.96	1.00%
Total Cumulative	8.99	1.14%
<b>5% LAP Benchmark</b>	<b>39.35</b>	<b>5%</b>



**U.S. Fish and Wildlife Service**

# **Finding of No Significant Impact**

for the Issuance of an Eagle Take Permit for  
Robertson Exploration Project

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**Nevada**

**Prepared by:**

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**December 2020**

# Introduction

The U.S. Fish and Wildlife Service (Service) received an application from Nevada Gold Mines LLC (Applicant) requesting eagle take coverage under the Bald and Golden Eagle Protection Act (Eagle Act) (16 U.S.C. §§ 668–668d and 50 Code of Federal Regulations [CFR] § 22.26) for incidental take of eagles at the Robertson Exploration Project (Project). The Project is an exploratory drilling operation with the goal to determine the extent and quality of mineral resources (such as gold and copper) in the area. Disturbance to eagles could occur from the noise associated with the drilling, as well as from the presence of people, the drill rigs, and other associated activities. The Project is located approximately 58 miles south of Battle Mountain and 70 miles southwest of Elko, Nevada in Lander County. The Applicant requested a 4-year incidental eagle take permit (permit) for the reoccurring loss of breeding productivity at one golden eagle (*Aquila chrysaetos*) territory in the vicinity of the Project. Issuance of a permit by the Service for take that is incidental to otherwise lawful activities under the Eagle Act constitutes a discretionary Federal action that is subject to the National Environmental Policy Act (NEPA; 42 United States Code [U.S.C.] §§ 4321–4347). In accordance with the NEPA, we prepared an Environmental Assessment (EA) analyzing the environmental consequences of issuing a permit for the take of golden eagles associated with the Project, as well as an alternative to this proposed action. This EA assists the Service in ensuring compliance with the NEPA and in making a determination as to whether any “significant” impacts to the environment not previously analyzed under the Service’s Programmatic Environmental Impact Statement for the Eagle Rule Revision, December 2016 (PEIS; USFWS 2016) could result from the analyzed actions, which would require preparation of an Environmental Impact Statement (EIS). “Significance” under NEPA is addressed by regulation 40 CFR § 1508.27, and requires short- and long-term consideration of both the context of a proposal and its intensity.

The Service’s purpose in considering the proposed action of issuing an eagle incidental take permit is to fulfill our authority under the Eagle Act (16 U.S.C. §§ 668–668e) and its regulations (50 CFR § 22). Applicants, whose otherwise lawful activities may result in take of eagles, can apply for eagle incidental take permits so that their projects may proceed without potential violations of the Eagle Act. The Service may issue eagle take permits for eagle take that is associated with, but not the purpose of, an activity. Such permits can be issued by the Service when the take that is authorized is compatible with the Eagle Act preservation standard; it is necessary to protect an interest in a particular locality; and it is associated with, but not the purpose of, the activity; and it cannot be practicably avoided (50 CFR § 22 and 81 Federal Register [FR] 91494).

The need for this federal action is a decision on an eagle incidental take permit application from Nevada Gold Mines LLC that is in compliance with all applicable regulatory requirements set forth under the Eagle Act in 50 CFR § 22.

# Proposed Action and Alternative Considered

In the EA, the Service fully analyzed two potential courses of action, summarized below, to respond to the Applicant's request for an incidental eagle take permit.

## Proposed Action

The Service proposed to issue a 4-year incidental eagle take permit, with associated conditions, to Nevada Gold Mines LLC for reoccurring loss of annual productivity from one golden eagle territory equating to 2.36 young fledged estimated lost from the eagle population. The permit would require implementation of all conservation measures and commitments described in the Applicant's submitted permit application.

## Alternative 1: No Action

Under the No-Action Alternative, the Service would take no further action on Nevada Gold Mines LLC's eagle take permit application.

# Public Comment and Tribal Coordination

The Service published the draft EA on the Service's Pacific Southwest Region webpage<sup>1</sup> for a 30-day public comment period from March 14, 2020 to April 13, 2020. The Service received one comment on the draft EA. This comment suggested a change in nomenclature regarding the way the BLM operates. This EA now accepts and incorporates that comment.

The Service sent letters to 9 federally-recognized tribal governments located within the vicinity of the Project, informing them of the application and inviting them to contact us if they wish to consult on this permit request. We sent a second letter to inform Tribes that the EA and draft FONSI are available, and encouraged and welcomed comments during the 30-day public review and comment period on the EA. The Service received no comments on the draft EA from Tribes.

# Selected Alternative

Based on review of the analyses detailed in the EA, the Service selected the Proposed Action of issuing a 4-year incidental eagle take permit to Nevada Gold Mines LLC for reoccurring loss of annual productivity from two golden eagle territories equating to 2.36 young fledged estimated

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<sup>1</sup> <https://www.fws.gov/cno/conservation/MigratoryBirds/EaglePermits.html>

lost from the eagle population with the requirement to implement all conservation measures and commitments described in the Applicant's application.

Take of golden eagles would occur under both alternatives; however, the Proposed Action fully offsets the take with required compensatory mitigation, which would not occur under the No-Action Alternative.

The Proposed Action is consistent with the purpose and need for this Federal action and is in compliance with all statutory (16 U.S.C. §§ 668) and regulatory requirements (50 CFR § 22.26 and 50 CFR § 13.21), including the criteria codified for permit issuance (50 CFR § 22.26(f)).

## **Significance Criteria**

Regulations of the NEPA define significance criteria for consideration by federal agencies (40 CFR § 1508.27). Below we examine these criteria for the selected Proposed Action.

### Context

NEPA requires consideration of the significance of an action in several contexts, such as society as a whole (human, national), the affected region, the affected interests, and the locality.

Significance varies with the setting of the proposed action. For instance, in the case of a site-specific action, significance would usually depend on the effects in the locale rather than in the world as a whole. Both short- and long-term effects are relevant in accordance with 40 CFR 1508.27(a). For purposes of analyzing the Proposed Action, the appropriate context for potential impacts associated with the Proposed Action is local and regional because the Proposed Action does not affect statewide or national resource values. The context of the Selected Alternative points to no significant environmental impact considering the following (as discussed in the EA):

- The Applicant will offset golden eagle take through compensatory mitigation. This will ensure that the impacts of issuing an eagle take permit on the local and regional golden eagle populations will be less than significant.
- Bald eagles and migratory birds may benefit from reduced electrocution risk due to the power pole retrofitting to be done for the eagle take permit.
- Authorizing incidental eagle take is not expected to have effects to species protected by the Endangered Species Act (ESA) at the Project facility. As described in the EA, the Service will evaluate the proposed mitigation site once the location is selected. The Service anticipates that adverse effects to species listed under the ESA would be avoidable, however if there is potential for impacts to species listed under the ESA, we would conduct an additional NEPA analysis.

## Intensity

The term "intensity" refers to the severity of a proposed action's impact on the environment. In determining the intensity of an impact, the NEPA regulations direct federal agencies to consider ten specific factors, each of which is discussed below in relation to the Selected Alternative for the Project.

*1) Impacts can be both beneficial and adverse and a significant effect may exist regardless of the perceived balance of effects.*

While consideration of the intensity of Project impacts must include analysis of both beneficial and adverse effects, only a significant adverse effect triggers the need to prepare an EIS (40 CFR 1508.27). The potential beneficial effects and adverse impacts of the Proposed Action are discussed briefly below.

**Beneficial Effects.** As described in the EA, the Proposed Action includes power pole retrofitting as mitigation for take of eagles. Such retrofits are anticipated to protect eagles from electrocution. As the number of retrofits to be done for mitigation is calculated at a 1.2 to 1 ratio, these avoided eagle electrocutions will more than offset Project-related take of eagles, thereby benefiting the eagle population as a whole. Pole retrofits are also expected to benefit other raptors that may be susceptible to electrocution.

**Adverse Effects.** As described in the EA, under the Proposed Action the Applicant would implement conservation measures to avoid or minimize the risk to eagles.

*2) The degree to which the selected alternative will affect public health or safety.*

The Proposed Action would include mitigating eagle take by retrofitting power poles to prevent eagle electrocutions. As eagle and other raptor electrocutions on power poles can start fires, decreasing eagle and other raptor electrocutions could benefit human safety by reducing fire risk.

*3) Unique characteristics of the geographic area such as proximity to historic or cultural resources, park lands, prime farm lands, wetlands, wilderness, wild and scenic rivers, or ecologically critical areas.*

The Service only evaluated whether or not to issue an eagle take permit to the Applicant, therefore only potential impacts to eagles and effects of eagle take on cultural practices were considered in the EA analyses. Thus, the Service concluded the Proposed Action of issuing an eagle take permit would not impact unique characteristics of the geographic area.

*4) The degree to which the effects on the quality of the human environment are likely to be highly controversial.*

No effects of the Proposed Action were identified as highly controversial. As a factor for determining within the meaning of 40 CFR 1508.27(b)(4) whether to prepare a detailed

EIS, controversy is not equated with the existence of opposition to a use. The NEPA implementation regulations (43 CFR 46.30) define controversial as “circumstances where a substantial dispute exists as to the environmental consequences of the proposed action and does not refer to the existence of opposition to a proposed action, the effect of which is relatively undisputed.” One comment on procedural nomenclature was provided on the EA.

*5) The degree to which the possible effects on the human environment are highly uncertain or involve unique or unknown risks.*

The Applicant provides information on the eagles in the Project vicinity, reducing uncertainty in understanding Project impacts to eagles. This surveying and monitoring provides certainty in our assessment of the risk to eagles from the Project. Monitoring required under the Proposed Action would also increase certainty in our assessment of the risks to eagles.

*6) The degree to which the action may establish a precedent for future actions with significant effects or represents a decision in principle about a future consideration.*

Issuance of an eagle take permit for the Project does not set precedent for, or automatically apply, to other eagle take permit applications the Service is reviewing or could review in the future. Each permit request will be evaluated on a case-by-case basis. Therefore, the Proposed Action does not establish precedents for future actions or represent a decision in principle about a future action. Moreover, this Project will not limit the Service’s discretion when processing future eagle take permit applications under the Eagle Act’s permitting regulations.

*7) Whether the action is related to other actions with individually insignificant but cumulatively significant impacts--which include connected actions regardless of land ownership.*

The EA analyzes cumulative effects on golden eagles as required by NEPA (40 CFR 1508.8) and the Eagle Act’s permitting regulations (50 CFR 22). Under 50 CFR 22.26, when reviewing a permit application, the Service is required to evaluate and consider effects of take permits on eagle populations at three scales: (1) the eagle management unit/bird conservation region, (2) local area, and (3) Project area. Our evaluation also considers cumulative effects. We incorporated data provided by the Applicant, our own data on permitted take and other documented eagle mortalities, and additional available information on population-limiting effects, in determining cumulative impacts to golden eagles. There are no significant adverse cumulative effects contributed under the Proposed Action.

*8. The degree to which the action may adversely affect districts, sites, highways, structures, or other objects listed in or eligible for listing in the National Register of Historic Places or may cause loss or destruction of significant scientific, cultural, or historical resources.*

Eagles and their feathers are revered and considered sacred in many Native American traditions. The Project, including the take of eagles, is not expected to interfere with cultural practices and ceremonies related to eagles or to affect Native Americans' ability to obtain or use eagle feathers. Moreover, eagle feathers that are found will be sent to our repository and, if in good condition, will be made available for these practices. Therefore, we do not anticipate any adverse effect on cultural practices.

*9. The degree to which the action may adversely affect an endangered or threatened species or its habitat that has been determined to be critical under the Endangered Species Act of 1973, or the degree to which the action may adversely affect a species proposed to be listed as endangered or threatened or proposed critical habitat.*

Because the golden eagle is not a federally listed species, issuance of an eagle take permit will not adversely affect an endangered or threatened species or its habitat. While retrofitting power poles will likely benefit other raptor species, none of these species is protected under the ESA.

*10. Whether the action threatens a violation of federal, state, or local law requirements imposed for the protection of the environment.*

The Proposed Action will not violate any federal, state, or local law.

## Finding of No Significant Impact

The Service's Migratory Bird Program concludes from the analysis conducted in the EA and the information provided above that the Proposed Action would not trigger significant impacts on the environment based on criteria established by regulations, policy, and analysis. Analyses of impacts were conducted at the Project, local, and regional scales, and direct, indirect, and cumulative effects were assessed. The selected Proposed Action, unlike the No Action Alternative, is unlikely to have significant impacts on eagles because there is mitigated take of eagles, cumulative effects are addressed, and the Proposed Action meets the Eagle Act's preservation standard (16 U.S.C. §§ 668a, 50 CFR § 22.3) and all regulatory requirements (50 CFR § 22.26).

Based on the findings discussed herein, we conclude that the Proposed Action is not a major Federal action and will result in no significant impacts to the environment, individually or cumulatively with other actions in the general area. This determination is based on the rationale that the significance criteria, as defined by the CEQ (40 CFR § 1508.27) have not been met. "Significantly" as used in NEPA requires considerations of both context and intensity. No environmental effects meet the definition of significance in context or intensity as defined in 40 CFR § 1508.27. Therefore, preparation of an EIS to further analyze possible effects is not required pursuant to Section 102(2)(c) of NEPA, and our environmental review under NEPA is concluded with this finding of no significant impact.

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Thomas Leeman  
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California-Great Basin Region  
U.S. Fish and Wildlife Service

## References

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40 Code of Federal Regulations (CFR) § 1508.27. Title 40 - Protection of Environment; Chapter V - Council on Environmental Quality; Part 1508 - Terminology and Index; Section (§) 1508.27 - Significantly. Available online: <https://www.ecfr.gov>

42 United States Code (U.S.C.) §§ 4321-4347. Title 42 - the Public Health and Welfare; Chapter 55 - National Environmental Policy; Subchapters I (Policies and Goals) and II (Council on Environmental Quality); Sections (§§) 4321-4347. Available online: <http://uscode.house.gov>

43 Code of Federal Regulations (CFR) 46. 2008. Title 43 - Public Lands: Interior; Part 46 - Implementation of the National Environmental Policy Act of 1969. 43 CFR 46. [73 Federal Register (FR) 61314, October 15, 2008, unless otherwise noted.]. Available online: <http://www.gpo.gov/fdsys/pkg/CFR-2011-title43-vol1/pdf/CFR-2011-title43-vol1-part46.pdf>

50 Code of Federal Regulations (CFR) § 13.21. Title 50 - Wildlife and Fisheries; Chapter I - United States Fish and Wildlife Service, Department of the Interior; Subchapter B - Taking, Possession, Transportation, Sale, Purchase, Barter, Exportation, and Importation of Wildlife and Plants; Part 13 - General Permit Procedures; Section (§) 13.21 – Issuance of permits. Available online: <https://www.ecfr.gov>

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