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**UNITED STATES DEPARTMENT OF THE INTERIOR**

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**Bureau of Land Management**  
**Battle Mountain Field Office     June 7, 2007**



Tonopah Field Station  
Bureau of Land Management  
1553 S. Main Street  
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**Environmental Assessment**  
**NV065-EA06-170**

**Mary-Goldspar Drilling Exploration Project**

## **1.0. INTRODUCTION/PURPOSE AND NEED**

### **Introduction**

The Sterling Gold Mining Corporation (SGMC) has submitted a Plan of Operations to the Bureau of Land Management (BLM), Tonopah Field Station for a drilling exploration program in the Mary-Goldspar project area located in Nye County, 8 miles southeast of Beatty, Nevada (see Figure 1). The project area is in habitat of the desert tortoise, a threatened species under the Threatened and Endangered Species Act. According to BLM Surface Management regulations at 43 Code of Federal Regulations (CFR), Subpart 3809.11(6), an operator must file a plan of operations for a project area *in any lands or waters known to contain Federally proposed or listed threatened or endangered species or their proposed or designated critical habitat, unless BLM allows for other actions under a formal land-use plan or threatened or endangered species recovery plan*. The BLM land-use plan pre-dates the above regulation and has no allowance for other actions. There is also no recovery plan for the desert tortoise on lands within the BLM Tonopah Planning Area. Therefore, a plan of operations was required for the proposed drilling exploration.

The exploration project is located approximately 1 mile north of the Sterling mine operated by SGMC. Gold is the primary commodity of interest at the Sterling mine and in the project area. SGMC would drill up to 6 exploration holes from three drill sites within the project area. Total proposed surface disturbance would be 0.08 acres. The project area is on public lands administered by the BLM – Tonopah Field Station. Figure 2 shows the drill sites and road access to the project area.

### **1.1 Purpose and Need**

The purpose of the Proposed Action is to explore for precious metals in the Mary-Goldspar project area. The need for the Proposed Action is for SGMC to explore for additional gold ore reserves in the vicinity of their Sterling mine. The statutory right of the SGMC to develop mineral resources on federal lands is recognized in the General Mining Law of 1872 (30U.S.C. §22 et seq.) and the Mining and Mineral Policy Act of 1970. BLM surface management regulations at 43 Code of Federal Regulations (CFR) 3809 require that all mineral exploration and development be conducted in a manner that prevents undue and unnecessary degradation to the Federal lands. To fulfill the requirements 43 CFR 3809 and of the National Environmental Policy Act, the BLM has prepared this Environmental Assessment (EA) to analyze the environmental consequences of the proposed drilling project and No Action Alternative and to describe measures to avoid or mitigate the environmental impacts of the Proposed Action.

### **1.2 Land Use Plan Conformance**

The Proposed Action is in conformance with the Tonopah Resource Management Plan and Record of Decision (RMP), approved on October 2, 1997. *A total of 6,028,948 acres (99% of the Tonopah Planning Area) is open to the operation of the mining laws, (page 23). The BLM provides for mineral entry, exploration, location and operations pursuant to the mining laws in a manner that 1) will not unduly hinder the mining activities, and 2) assures that these activities are conducted in a manner which will prevent undue or unnecessary degradation of the public land, (page 35). All operations shall comply with all Federal and State laws, including those relating to air quality, water quality, solid waste, fisheries, wildlife and plant habitat, and archeological and paleontological resources (page 36).*



### BARE MOUNTAIN LOCATION MAP



Figure 1. - Location

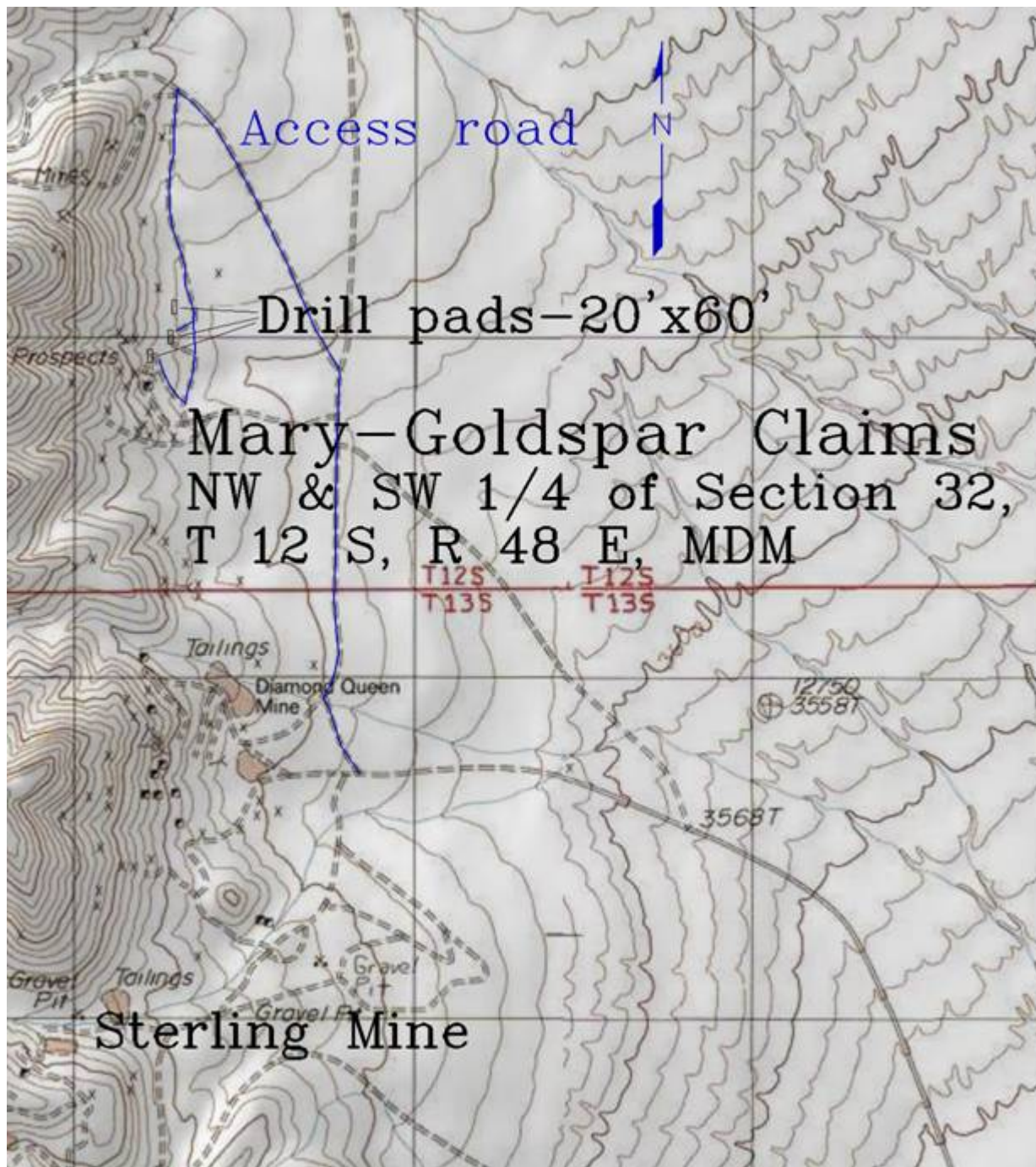


Figure 2. – Project Site

### **1.3 Relationship to Statutes, Regulations and Other Government Plans**

#### **National Environmental Policy Act of 1969**

The National Environmental Policy Act of 1969 (NEPA), as amended (P. L. 91-190, 42 USC 4321 et seq.) is the basic national charter for protection of the environment. The Act establishes policy, sets goals, and provides means for carrying out the policy. It is the law under which Environmental Impact Statements and Environmental Assessments (EA's) are prepared. The regulations which implement NEPA are listed at 40 CFR Part 1500.

#### **The Federal Land Policy and Management Act of 1976 (P. L. 94-579)**

The Federal Land Policy and Management Act (FLPMA) was passed to authorize BLM's management of public lands. In Section 302 (b) of the Act it states, "In managing the public lands, the Secretary shall, subject to this Act and other applicable law ...regulate, through easements, permits, leases, licenses and published rules or other instruments as the Secretary deems appropriate, the use, occupancy, development of the public lands...." "In managing the public lands the Secretary shall, by regulation or otherwise take any action necessary to prevent unnecessary or undue degradation of the lands."

#### **Regulations (43 CFR 3809) Surface Management of Mining**

The original 43 CFR 3809 regulations were promulgated in 1980 to implement provisions of the Federal Land Policy and Management Act for the surface management of mining. Revised regulations were promulgated on January 20, 2001 and on October 31, 2001. The purpose of the 3809 regulations is to prevent undue or unnecessary degradation of the Federal lands due to mineral exploration or mining activities under the General Mining Law of 1872. It was the filing of a 43 CFR 3809 Plan of Operations for the Mary-Goldspar Exploration Project that prompted the preparation of this environmental assessment under the National Environmental Policy Act. Some of the pertinent environmental standards of 43 CFR 3809 which would apply to the proposed exploration project are listed below:

- \* design, construct and maintain roads and structures to minimize erosion, siltation, air pollution....use existing access and follow the natural contour of the land to minimize surface disturbance, including cut and fill....
- \* remove, segregate and preserve topsoil or other suitable growth material to minimize erosion and sustain revegetation...
- \* grade or otherwise engineer disturbed areas to a stable condition to minimize erosion and facilitate revegetation.
- \* revegetate disturbed lands by establishing a stable...that is comparable in both diversity and density to pre-existing natural vegetation...
- \* plug all exploration drill holes to prevent mixing of waters from aquifers....

## **Wildlife**

A number of public laws, acts and executive orders provide direction to the BLM in managing wildlife resources. Some of these are: National Environmental Policy Act of 1969; Endangered Species Act of 1973 (as amended); Sikes Act; Executive Order No. 11514, Protection and Enhancement of Environmental Quality; Federal Land Policy And Management Act of 1976. The BLM has translated applicable parts of these laws, acts, and executive orders into policies and guidance, which are contained within the BLM manual system. Manual 6840 provides direction to the wildlife program for Threatened and Endangered Wildlife and Manual 6740 provides direction for Wetland-Riparian Area Protection and Management. The Migratory Bird Treaty Act affords protection to migratory bird species. The BLM's primary focus is on migratory birds that nest on the ground or in shrubs and may be affected by surface disturbing actions.

## **Special Status Plant Species**

It is BLM's policy to carry out management, consistent with the principals of multiple use, for the conservation of Special Status Plant Species and their habitats and will ensure that actions authorized, funded, or carried out do not contribute to the need to federally list any of the species as threatened or endangered.

## **Cultural Resources**

Several laws require consideration of cultural resources and Native American concerns. The National Historic Preservation Act (as amended) requires that federal agencies consider the effects of all actions on cultural resources and mitigate effects to significant cultural resources. It also requires that federal agencies consult with the relevant State Historic Preservation Officer (SHPO) on these matters. The requirements of the National Historic Preservation Act are currently dealt with under a State Protocol Agreement between BLM and the Nevada SHPO. The National Historic Preservation Act also has provisions for consulting with Native Americans on the effects of proposed actions to archaeological sites or areas of traditional use/concern. The American Indian Religious Freedom Act requires that agencies obtain and consider the views of Native Americans during decision-making. The Religious Freedom Restoration Act requires that agency decisions do not burden the free exercise of religion by Native Americans, especially in terms of access, use, or ritual practice. FLPMA and NEPA also have provisions for providing tribal officials with opportunity to comment on planning and NEPA documents.

## **Fire Management Objectives**

The BLM attaches the following operating measures to all authorized activities on public lands in the Battle Mountain District which have the potential for accidentally starting a wildland fire.

1. All vehicles must carry fire extinguishers.
2. Adequate fire fighting equipment i.e. shovel, pulaski, extinguisher(s), and/or an ample water supply must be kept at the drill site(s).
3. Vehicle catalytic converters shall be inspected often and cleaned of all brush and grass debris.
4. Welding shall be done in an area free from or mostly free from vegetation. An ample water supply and shovel must be on hand to extinguish any fires created from the sparks. Extra personnel should be at the welding site to watch out for fires created by welding sparks.



5. Wildland fires must be immediately reported to the BLM Central Nevada Interagency Dispatch Center at (775) 623-3444.

6. When conducting operations during the months of May through September, the operator must contact the BLM Battle Mountain Field Office, Division of Fire and Aviation at (775)635-4000 to find out about any fire restrictions in place for the area of operation and to advise this office of approximate beginning and ending dates for your activities.

## **2.0. DESCRIPTION OF THE PROPOSED ACTION AND ALTERNATIVE**

### **2.1 Location, Topography and Access**

The Mary-Goldspar project area is located on the west side of Crater Flats in Nye County, Nevada in Section 32, Township 12 South, Range 48 East, Mount Diablo Meridian. Crater Flats is bounded on the west by the Bare Mountains and the Yucca Mountains on the east. The project area is located approximately 1 mile north of the Sterling mine, and approximately 8 miles southeast of the town of Beatty, Nevada. The site is accessed by a well maintained gravel road off US highway 95. Figure 1 illustrates the general location of the project.

### **2.2 Ownership**

Sterling Gold Mining Corporation (SGMC) is the operator of the Sterling mine and the Mary-Goldspar exploration drilling project. SGMC is a wholly-owned subsidiary of the Imperial Metals Corporation.

### **2.3 Land Status**

The Mary-Goldspar Project is located on public lands administered by the BLM. Unpatented mining claims within the project area are owned by Saga Exploration Company of Reno, Nevada. SGMC has leased the mining claims from Saga. Figure 2 shows the drill sites and road access to the project area.

### **2.4 Existing Surface Disturbance**

The Mary-Goldspar project area has been disturbed by past mining and exploration activities. Existing disturbance is illustrated on figure 2. There are a number of existing roads that have been used for exploration by previous operators, and as access to existing mining prospect pits and underground excavations. These existing roads would be used to access the proposed project area. Total pre-existing, unreclaimed surface disturbance in and adjacent to the project area is approximately 0.75 acres.

### **2.5 Proposed Action**

The SGMC would drill up to 6 exploration holes from three drill sites. The drilling would be done by a truck or track mounted reverse circulation drill rig. Drilling depth would range from 600 to 1,000 feet. Past exploratory drilling near the proposed project area has indicated a depth to ground water in excess of 1200 feet. Therefore, drilling is not expected to intercept groundwater. From 2,000 to 3,000 gallons of water would be used in drilling to make up drilling fluid for borehole support and to float drill cuttings up and out of the borehole. Water would be obtained from the Sterling mine, one mile south of the Mary-Goldspar project and would be brought to the drill site by

water truck. Each drill pad would measure 20 ft x 60 ft and would be located adjacent to existing dirt roads. The pad areas are on flat ground and the drill rig would essentially set up with minimal leveling of the pad. Drill sumps would be excavated within the pad area and would be used to contain the drilling fluid. Sump dimensions would measure 4 feet by 10 feet by 3 feet deep. Vehicles and equipment would use existing dirt roads to access the drill sites. Access roads would be used at their current width. Therefore, no road construction or widening would be done. Total new disturbance caused by the Project would be approximately 0.08 acres ((20 ft x 60 ft) x 3)/43,560 ft<sup>2</sup>/acre).

One drill rig would be used in the project. Generally 3 workers would operate the drill rig and drive the water truck. The work day would be approximately 12 hours. Workers would stay in a hotel in Beatty, Nevada and commute 48 miles round trip to the project site. The project would last from 2-4 weeks depending on assay results from initial drill holes and the variables of drilling and possible downtime.

## **2.6 Operating Procedures, Mitigation and Reclamation Measures Proposed by SGMC**

The following section describes the operating procedures and mitigation measures that would be employed by SGMC to prevent unnecessary or undue degradation of the environment.

### Reclamation

SGMC would backfill drill sumps and recontour drill pads to closely approximate the original topography. The areas would be scarified as necessary and reseeded with a seed mix specified by the BLM.

### Invasive, Non-Native Plant Species (Noxious Weeds)

SGMC would work with BLM to prevent the spread of invasive, non-native species and noxious weeds in the area of the Proposed Action. Employees and contractors would be educated to identify weeds that could occur in the project area. Should invasive weeds be identified, SGMC would take BLM-directed measures to prevent their spread.

### Air Emissions Control

Drill holes would be drilled with water (drilling fluid). Project-related traffic would observe prudent speed limits to minimize dust emissions.

### Public Safety

Project-related traffic would observe prudent speed limits to enhance public safety and protect wildlife.

### Solid and Hazardous Waste

Project-related refuse would be disposed of on a daily basis consistent with applicable regulations. No refuse would be disposed on-site. In the event that material such as gasoline or diesel fuel is spilled, measures would be taken to control the spill and the Nevada Division of Environmental Protection (NDEP) would be notified.

### Fire Control

Mobile equipment would be properly muffled and equipped with suitable fire suppression equipment, such as fire extinguishers and hand tools.



### Protection of Cultural Resources

Exploration and reclamation activities would avoid the two historic mining sites found during the cultural survey of the project area.

### Surface and Groundwater Protection

There are no surface waters within the project area. Drilling fluids and their contained cuttings would be confined and settled in the drill sumps. Water used for drilling would be trucked from the Sterling Mine site, one mile south of the project area.

Plugging of drill holes would be done immediately upon completion of drilling operations. All exploration holes would be plugged in compliance with Nevada State Standards codified under **NAC 534.4369 and NAC 534.4371**. The following is a summary of methods of borehole plugging that would be employed during the Mary-Goldspar exploration project.

#### Plugging of dry holes

If the elevation of the bottom of the borehole is more than 50 feet above the preexisting natural elevation of any saturated ground water stratum, the borehole would be plugged by:

- (a) Backfilling the borehole from the bottom to 10 feet from the surface with compacted soil which is uncontaminated;
- (b) Placing concrete grout, cement grout, neat cement or bentonite grout or sodium bentonite chips or pellets specifically designed to be used to plug boreholes from 10 feet below the surface to the surface.

#### Plugging of wet holes

Subsurface abandonment of wet holes will consist of complete backfilling with bentonite pellets or equivalent.

## **2.7 Alternatives to the Proposed Action**

### No Action Alternative

NEPA requires that an alternative of 'No Action' be analyzed. In this instance, the No Action alternative would mean that the proposed exploration plan would not be approved and there would be no new surface disturbance. The No Action Alternative will serve to provide the existing resource conditions against which the impacts of the Proposed Action are compared.

### Other Alternatives

The size and scope of the Mary-Goldspar Project is limited. There are no feasible alternative locations for the proposed exploration activities because the project location is determined by the specific favorable geologic conditions. Therefore, alternate locations are not viable alternatives and are not evaluated further in this EA. In this environmental assessment, only the **Proposed Action**, with mitigation measures and the **No Action Alternative** will be fully analyzed.

### 3.0 AFFECTED ENVIRONMENT, ENVIRONMENTAL CONSEQUENCES AND PROPOSED MITIGATION OR AVOIDANCE MEASURES

#### 3.1 General Setting

The drilling area is located along the western side of Crater Flats and on the eastern edge of Bare Mountain. The area is within the northeastern portion of the Mojavian Floristic Region with a creosote bush (*Larrea tridentata*) and blackbrush (*Coleogyne ramosissima*) community. The area is within the Basin and Range Physiographic Province which is characterized by elongate mountain ranges and intervening valleys arranged generally in a north-south parallel pattern. The Mojave Desert is characterized by hot, dry summers and cool, dry winters. Average precipitation of 3.5 inches occurs sporadically from either winter rains or summer thundershowers.

#### 3.2 Critical Elements and Other Resources Affected by the Proposed Action

To comply with the National Environmental Policy Act (NEPA), the Bureau of Land Management is required to address specific elements of the environment that are subject to requirements specified in statute or regulation or by executive order (BLM 1988, BLM 1997). The following table outlines the 15 critical elements that must be addressed in all environmental assessments, as well as other resources deemed appropriate for evaluation by the BLM, and denotes if the Proposed Action or No Action Alternative affects those elements.

CRITICAL ELEMENTS	Present Yes/No	Affected Yes/No	OTHER RESOURCES	Present Yes/No	Affected Yes/No
Air Quality	Yes	Yes	Forestry	No	No
ACECs	No	No	Land Use and Access	No	No
Cultural Resources	Yes	No	Minerals	Yes	No
Environmental Justice	No	No	Rangeland Management	Yes	No
Farmlands (Prime or Unique)	No	No	Recreation	No	No
Floodplains	No	No	Socioeconomics	No	No
Invasive Non-native Species	Yes	Yes	Soils	Yes	Yes
Migratory Birds	Yes	No	Vegetation incl. Special Status Species	Yes	Yes
Native American Issues	No	No	Visual Resources	Yes	No
Threatened or Endangered Species	Yes	No	Wild Horses and Burros	Yes	No
Wastes, Hazardous and Solid	Yes	No	Wildlife incl. Special Status Species	Yes	No
Water Quality/ Hydrology	No	No			
Wetlands/Riparian	No	No			
Wild & Scenic Rivers	No	No			
Wilderness	No	No			

#### 3.3 Affected Resources

This section describes resources or elements of the environment which would be affected by the Proposed Action (the Mary-Goldspar exploration project) and No Action Alternative. Additionally, resources are analyzed which would be affected absent mitigation measures or operating procedures to reduce, or avoid impacts to those resources. BLM resource specialists have further determined

that the additional resources listed above and identified as “Not Present” in the project area, are not affected by the Proposed Action and will not be further discussed in this EA.

### **3.3.1 Air Quality**

#### Affected Environment (Air Quality)

The project area is in the Mojave Desert. Temperatures range from approximately 10°F-115°F annually. Precipitation averages 3-4 inches a year, with most of the rain occurring in the spring and winter months. Air quality is generally good and falls within the applicable State and Federal air quality standards. The region is in attainment for all National Ambient Air Quality Standards such as airborne dust and various emissions from engine exhaust.

#### Environmental Consequences of the Proposed Action on Air Quality

Local air quality would be impacted by dust and exhaust emissions from the project. Project vehicles and equipment would raise dust emissions from dirt roads during ingress and egress from the drilling site. Engine exhaust emissions include oxides of nitrogen, carbon monoxide, unburned hydrocarbons and carbon soot. Diesel engines in the drill rig and water truck would produce the bulk of exhaust emissions for the project. Smaller vehicles with gasoline engines, with functioning catalytic converters, would be a minor source. The combined effect of the above emission sources would be short-term and would not cause a significant deterioration in air quality.

#### Environmental Consequences of the No-Action Alternative on Air Quality

Under the No-Action Alternative none of the above emissions (road dust and equipment exhaust) would happen.

#### Mitigation Measures for Air Quality

Project traffic would be limited to a top speed of 25 mph on dirt access roads to limit fugitive dust.

### **3.3.2 Cultural Resources**

#### Affected Environment (Cultural Resources)

On November 9, 2006, HRA, Inc. (Las Vegas, Nevada) conducted an archeological survey of an area approximately 20 acres in size which included the Mary-Goldspar drill sites (HRA report # 06-27). The survey took place and was conducted under BLM Resource Use Permit No. 6-2628. Results of this survey are contained in HRA Report 06-27 and are summarized below:

Two cultural sites were found. The sites are two adits related to small-scale historic mining. Eight isolates were also discovered and recorded in the survey area. None of the sites or isolates is located on the drill sites or access roads. HRA recommended that neither of the cultural sites were eligible for the National Register of Historic Places (NRHP) and the BLM archeologist concurred with the recommendation.

#### Environmental Consequences of the Proposed Action on Cultural Resources

The two cultural sites and 8 isolates near the project area would not be affected by exploration activities (see mitigation measures below). There would be no direct or indirect impacts.

#### Environmental Consequences of the No Action Alternative on Cultural Resources

There are no impacts to cultural resources under the No Action Alternative as no drilling activities would occur.

### Mitigation Measures to Avoid Cultural Resources

The two sites identified by HRA in the archeological survey conducted November 9, 2006 are outside of the planned exploration drilling. Company, as well as contract employees, would be instructed to stay away from the historic mining sites (adits) and other isolated features.

### **3.3.3 Invasive, Non-Native Species**

#### Affected Environment (Invasive, Non-Native Species)

Red brome is an invasive grass species that become prevalent in the Mojave Desert area of southern Nye County and beyond. Red brome was identified at the project site during an onsite survey done on September 28, 2006.

#### Environmental Consequences of the Proposed Action on Invasive, Non-Native Species

Excavation of the drill sump would disrupt soils. Red brome germinates and grows in disturbed soils. There is a small potential that other invasive or noxious species would be introduced to the site from vehicles that have picked up the seeds from another region.

#### Environmental Consequences of the No Action Alternative on Invasive, Non-Native Species

Under the No-Action Alternative, there would be no exploration activities and therefore, no effect on the quantity and distribution of red brome or other invasive, non-native species.

#### Monitoring and Mitigation Measures for Invasive, Non-Native Species

To minimize the introduction of noxious weeds into the project area, the operator would be required to take the following preventative measures: 1) stay on existing roads to and from the mine site and in the project area, 2) use a certified weed-free seed mix during reclamation, 3) conduct concurrent reclamation when feasible, and 4) implement a weed monitoring and control program. The BLM would provide the operator with a color brochure, 'Noxious Weeds of Central Nevada.' The project area would be screened semi-annually by the operator for invasive weed species. If a limited amount of weeds were discovered, they would be pulled, placed in a plastic bag, sealed and disposed of properly. For more intensive infestations, the operator would consult with the BLM on containment or eradication measures. The BLM would instruct the operator to minimize pad disturbance and not to strip topsoil prior to drilling.

### **3.3.4 Vegetation**

#### Affected Environment (Vegetation)

Vegetation in the project area is dominated by blackbrush (*Coleogyne ramosissima*), creosote bush (*Larrea tridentata*), fourwing saltbrush (*Atriplex canescens*), Nevada ephedra (*Ephedra nevadensis*), globemallow (*Sphaeralcea ambigua*), desert trumpet (*Eriogonum inflatum*) and prince's plume (*Stanleya pinnata*). Other species include spiny hopsage (*Grayla spinosa*), indian paintbrush (*Castilleja, sp.*), larkspur (*Delphinium, sp.*) and red brome (*Bromus rubens*).

#### Environmental Consequences of the Proposed Action on Vegetative Resources

Native vegetation would be eliminated on the drill pads, either by crushing or by excavation of the drill sump. Approximately 0.08 acres of vegetative cover would be affected. None of the plants in the project area are special status species or part of a unique vegetation community. Residual impacts to vegetation would be reduced over time as revegetation approaches pre-disturbance cover and diversity.

### Environmental Consequences of the No Action Alternative

Under the No Action Alternative there would be no surface disturbance and loss of vegetation.

### Mitigation Measures (Vegetation)

SGMC has committed to regrade and reshape disturbed areas, rip or scarify pads, if necessary, and reseed disturbed areas with a seed mix approved by the BLM. The BLM seed mix is listed below:

<u>Species</u>	<u>Seed rate - Pure Live Seed/acre</u>
Shadscale ( <i>Atriplex confertifolia</i> )	2.0
Fourwing saltbush ( <i>Atriplex canescens</i> )	4.0
Desert spinach ( <i>Atriplex polycarpa</i> )	3.0
Quailbush ( <i>Atriplex lentiformis</i> )	3.0
White bursage ( <i>Ambrosia dumosa</i> )	1.0
Desert globemallow ( <i>Sphaeralcea ambigua</i> )	0.5
Palmer penstemon ( <i>Penstemon palmari</i> )	0.5
Total	14.0

### Monitoring

The BLM would monitor the progress of revegetation and screen for noxious weeds for several years after the project is completed.

## **3.3.5 Soils**

### Affected Environment (Soils)

Soils in the Mary-Goldspar Exploration project ranges from sandy gravels to silty, fine sand with gravel. Except for the drill sump, topsoil will not be stripped during drill site construction.

### Environmental Consequences of the Proposed Action on Soils

Approximately 0.08 acres of native desert soils would either be disrupted or compacted during sump construction and drilling.

### Environmental Consequences of the No Action Alternative on Soils

There would be no disturbance and no environmental impacts from the No Action Alternative.

### Mitigation Measures for Soils

Upon completion of the project, the drill sumps would be backfilled and compacted soils would be scarified and the pad would then be reseeded. Revegetation will likely take from 2-5 years.

## **3.3.6 Migratory Birds**

### Affected Environment (Migratory Birds)

A migratory bird is any species of bird **except** upland game species, feral pigeons, European starlings, and English house sparrows. Migratory birds are protected by the Migratory Bird Treaty Act. Surface disturbing activities during the migratory bird nesting season (May 1st through August 31st) may destroy the eggs or young of ground-nesting migratory birds. Any

violation of the MBTA can incur penalties up to \$15,000 or 6 months imprisonment, or both per individual offense.

Ground and shrub-nesting migratory birds that may inhabit the project and environs include the following:

Ground and shrub nesters

Sage Sparrow  
Black-throated Sparrow  
Horned Lark  
Brewer's Sparrow  
Nighthawk spp.  
Burrowing Owl  
Common Poorwill  
Rock Wren  
Gnatcatcher spp.  
Gambel's Quail

Shrub and small tree nesters

Loggerhead Shrike  
Ash-throated Flycatcher  
Western Kingbird  
Cactus Wren (cholla cactus)  
Scott's Oriole (Joshua trees)  
Le Conte's Thrasher (shrubs and cholla cactus)  
Say's Phoebe  
American Kestrel  
Mourning Dove (occasional ground-nesters)  
Costa's Hummingbird  
Anna's hummingbird

Environmental Consequences of the Proposed Action on Migratory Birds

If drill pads are prepared during the migratory bird nesting season, there would be a possibility of destroying the eggs or young of ground or shrub-nesting migratory birds.

Environmental Consequences of the No-Action Alternative on Migratory Birds

There would be no surface disturbing activity and no environmental consequences under the No Action Alternative.

Mitigation Measures for Migratory Birds

To prevent violation of the Migratory Bird Treaty Act, SGMC would either conduct surface disturbing activities outside of the migratory bird nesting season (roughly May through August) or employ a qualified biologist to survey prospective work areas prior to surface disturbance during the nesting season. If nests are found within a proposed drill pad, pad preparation would be delayed until the young birds have fledged or until the end of the nesting season.

### **3.3.7 Threatened and Endangered Species**

Affected Environment (Threatened and Endangered Species)

The proposed project area is located in the northernmost extent of the range of the Mojave population of the desert tortoise. The Mojave population is listed as threatened under the Threatened and Endangered Species Act. On September 28, 2006, Converse Consultants conducted a block survey in and around the proposed Mary-Goldspar project area. No live tortoises or tortoise sign were observed during the survey. No other threatened or endangered animal or plant species inhabits the project area or environs.

Environmental Consequences of the Proposed Action on Threatened and Endangered Species

The U.S. Fish and Wildlife Service (USFWS) has determined that the proposed Mary-Goldspar project is within the scope of the 2003 Programmatic Biological Opinion (PBO) issued to the BLM Tonopah Field Station. The PBO covers a range of small-scale actions that typically happen or are approved by the BLM in areas of desert tortoise habitat administered by the Tonopah Field Station.

The USFWS concluded that the Mary Goldspar drilling project would not likely jeopardize the continued existence of the desert tortoise.

Environmental Consequences of the No Action Alternative on Threatened and Endangered Species

In the No Action Alternative, there would be no exploration activities and therefore, no impacts to the desert tortoise.

Mitigation Measures for Threatened and Endangered Species

The U.S. Fish and Wildlife Service has specified a set of stipulations and mitigation measures that must be applied to the proposed Mary-Goldspar drilling project. These measures are listed below:

BLM shall present a tortoise-education program to all personnel working on projects or activities covered under this biological opinion. This program shall be presented by a qualified tortoise biologist for those projects with the greatest potential impacts to desert tortoises. A video or fact sheet, as approved by the Service, may be presented or provided in lieu of a presentation for those projects with low potential impacts.

The program will include information on the life history of the desert tortoise, legal protection for desert tortoises, penalties for violations of Federal and State laws, general tortoise-activity patterns, reporting requirements, measures to protect tortoises, terms and conditions of this biological opinion, and personal measures employees can take to promote the conservation of desert tortoises. The definition of "take" will also be explained. Specific and detailed instructions will be provided on the proper techniques to capture and move tortoises which appear onsite, in accordance with Service-approved protocol. Currently, the Service-approved protocol is Desert Tortoise Council 1994, revised 1999. Workers will be encouraged to carpool to and from project sites.

Project or activity access will be limited to existing roads and trails unless authorized by the BLM and the Service, as appropriate. Upon determination of an impending field development, a transportation plan will be requested to reduce unnecessary access roads. If new access is required, road construction, blading of existing roads or trails, or other surface associated with BLM-authorized projects will be confined to the authorized location and not exceed the minimum size required for safe passage.

Surface disturbance will be confined to the minimum amount necessary to perform the authorized activity.

The project proponent shall implement measures to ensure that desert tortoises do not fall into open excavations at drill sites which may include covering the opening or surrounding it with tortoise exclusionary fencing.

Project vehicles shall not travel at speeds which would endanger tortoises in the action area.



The area underneath parked vehicles and equipment shall be inspected for tortoises before moving such materials, vehicles or equipment. Tortoises may have taken cover underneath the vehicle/equipment during the time it was parked.

If a tortoise is found onsite during project activities which may result in take of the tortoise (e.g., in harm's way), such activities shall cease until the tortoise moves, or is moved out of harm's way by a qualified tortoise handler.

A litter-control program shall be implemented to minimize predation on tortoises by ravens drawn to the project site. This program will include the use of covered, raven-proof trash receptacles, removal of trash from project areas to the trash receptacles following the close of each work day or within 24 hours following authorized events (food related trash), and proper disposal of trash in a designated solid waste disposal facility. Appropriate precautions must be taken to prevent litter from blowing out along the road when trash is removed from the site. The litter-control program should apply to all actions covered under this biological opinion. A litter-control program shall be implemented, by the responsible Federal agency or their contractor, to minimize predation on tortoises by ravens and other predators drawn to the project site.

The BLM must keep an up-to-date log of all actions taken under this tortoise consultation including violations of the Terms and Conditions; acreages affected; and number of desert tortoises injured, killed or removed from the project area.

### **3.3.8 Wildlife including Special Status Species**

#### Affected Environment (Wildlife)

The project and local area provides habitat for wildlife, including black-tailed jackrabbit, badger, coyote, various rodents, songbirds, birds of prey, and lizards. This type of habitat is common throughout the region. There are no surface water resources in or near the project area. The project area borders the east side of Bare Mountain. Big horn sheep inhabit Bare Mountain and may occasionally pass through the project area.

#### Environmental Consequences of the Proposed Action on Wildlife

Exploration activities would directly affect wildlife habitat through the removal of vegetation on an area of 0.08 acres. In a period of 2-5 years, vegetation would recover to a sufficient density and cover to provide habitat and forage for local wildlife.

Equipment noise and human presence during exploration activities may result in wildlife avoidance of the immediate area of activity. Project traffic and drilling activities may inadvertently kill small wildlife, such as rabbits and burrowing rodents. The limited amount of disturbance associated with each drill site and the distribution of the disturbance over a large area would result in minimal impacts to wildlife.

#### Environmental Consequences of the No Action Alternative on Wildlife

Under the No Action Alternative, there would be no project-related disturbance and no impacts to wildlife.

### Mitigation Measures (Wildlife)

General wildlife mitigation measures would include minimizing the area of disturbance, reclaiming the project disturbance after completion of the project, and collecting and disposing of project related trash daily. Operating measures identified for the desert tortoise would also benefit other wildlife.

### **3.3.9 Wild Horses and Burros**

#### Affected Environment (Wild Horses and Burros)

The proposed project area is located within the Bullfrog Herd Management Area (HMA) which is approximately 240 square miles (153,600 acres) in size. There are no wild horses and an estimated 45 burros in the Bullfrog HMA.

#### Environmental Consequences of the Proposed Action on Wild Horses and Burros

There is a low potential for encounters between burros and project-related vehicles in transit to and from the project site. Equipment noise and human presence during exploration activities may cause burros to avoid the immediate project area.

#### Environmental Consequences of the No Action Alternative on Wild Horses and Burros

Under the No Action Alternative, there would be no project-related activities and no environmental impact to wild burros.

#### Mitigation Measures (Wild Horses and Burros)

Traffic would be limited to a top speed of 25 mph on dirt access roads. If burros are encountered during travel to and from the project area or during drilling in the project area, project traffic would be required to slow down, so as not to frighten or injure the animals.

## **4.0 CUMULATIVE IMPACTS OF THE MARY-GOLDSPAR EXPLORATION PROJECT**

This section will address the cumulative impacts to the affected environment as a result of the Proposed Action, in concert with other past, current and any reasonably foreseeable future activities near the project area,. The Crater Flats and Bare Mountain areas are BLM-managed public lands. The area is largely undeveloped. Creosote bush and black brush are the dominant shrubs in the local area. A Cumulative Impacts Study Area was defined as a circle centered on the drill pads and with a radius of two miles. Past and present actions in and near the project area within a two mile radius include approximately 90 acres of current and historic mining disturbance to the south in the Sterling mine area and approximately 20 acres of older mining disturbance one-half mile north of the project area. Other past small-scale mining and mineral exploration has caused an additional 20 acres of disturbance. Other existing roads, outside the mining areas affect approximately 10 acres. To the east into Crater Flats and to the west into Bare Mountain, disturbance is negligible.

The Proposed Action would only disturb 0.08 acres. This amount added to the other existing disturbance would affect 140 acres out of 8,042 acres within a two mile radius of the drill pads. Reasonably foreseeable future activities, including the proposed action, may include an expansion of facilities at the Sterling mine and the possibility of additional drill exploration in the Mary-Goldspar area, if favorable gold mineralization is intercepted in the proposed drilling project.

The range of the threatened Mojave population of the desert tortoise includes southeastern California, southern Nevada, extreme southwestern Utah and northwestern Arizona. The Mary-Goldspar project is at the northern extremity of the range. Tortoise habitat in the Tonopah Planning Area is of low quality Class III) with low tortoise populations. The USFWS has not classified the area as critical habitat for recovery of the desert tortoise. No live tortoises or tortoise sign were observed during the survey of the project area conducted on September 28, 2006. The USFWS concluded that the Mary Goldspar drilling project would not likely jeopardize the continued existence of the desert tortoise.

The most notable reasonably foreseeable future action in proximal tortoise habitat is the proposed Yucca Mountain rail line which would pass from north to south down Crater Flats to the east of the Mary-Goldspar project. Past present and future actions would not likely affect the low population of desert tortoises living in Class III habitat. Future actions in desert tortoise habitat would be subject to consultation with the USFWS and to mitigation measures designed to reduce or prevent impacts to the desert tortoise.

BLM land management concerns for the area will continue to focus on the maintenance of wildlife habitat in general and habitat for special status species, especially the threatened desert tortoise, in particular; protection of cultural sites; mitigation and monitoring of impacts from mining and mineral exploration and control of invasive, non-native species. The Mary-Goldspar project is small in size and short in duration. The project would not disturb any cultural sites and would not permanently fragment or destroy wildlife habitat or vegetation. No threatened, endangered, or special status animal species would be adversely affected by the project. Project disturbance would be reclaimed at the end of the drilling program. The potential for an invasive species, other than red brome, to germinate in the disturbed ground on drill pads is very low.

Based upon the small size and impact of the proposed action and upon the mitigation measures that have been applied to existing actions (the Sterling mine) and would be applied to the Mary-Goldspar project and any reasonably foreseeable future actions, the potential for a cumulative impact to any of the analyzed resources is minimal.

## List of BLM Preparers:(40 CFR 1502.6)

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### Consultation:

Chuck Stevens, Sterling Gold Mining Corporation, prepared a template of the environmental assessment including information on the Proposed Action, operator-proposed reclamation and environmental mitigation measures, and data on the affected environment generated by Converse Consultants. Tracy Kipki (Nevada Department of Wildlife) supplied a list of migratory birds that have been observed in the region.

### REFERENCES

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