

**U.S. Department of the Interior**

**Bureau of Land Management**

**Hassayampa Field Office**

**21605 North 7<sup>th</sup> Avenue**

**Phoenix, AZ 85027**

**Finding of No Significant Impact (FONSI)**

**DOI-BLM-AZ-P010-2011-043-EA**

Legal Description and location: T. 5 N., R. 7 W., SE¼ SE¼, NE¼ SE¼ of Section 7, Maricopa County, approximately 4 acres of BLM lands.

Project Name: Sherri Ann

Applicant: The Gem Shop

**Background**

The BLM Hassayampa Field Office (LSFO) has completed Environmental Assessment (EA) #DOI-BLM-AZ-P010-043-EA which documents the review of a proposed mineral exploration and mining operation on BLM lands as described above. The subject lands are under the administration of the HFO, and would be the location of a new mining operation.

**Finding of No Significant Impact**

Based upon a review of the analysis of potential environmental impacts contained in the EA and supporting documents, I have determined that the Proposed Action to explore for and mine semi-precious gem stones and/or mineral specimens of commercial value will not have a significant effect on the quality of the human environment, individually or cumulatively with other actions in the general area. This FONSI is based on criteria for significance as defined in 40 CFR 1508.27, and does not exceed those effects with regard to the context and intensity of impacts described in the EA as described below.

**Context**

The project is a site specific action that involves approximately 4 acres of BLM administered lands. The site is located on lands which exhibit minor disturbance from past prospecting activities and is located on land which is near solid rock outcrop.

**Intensity**

- 1) *Impacts that may be both beneficial and adverse.*

Benefits of the proposed action include offering mineral specimens for sale at the proponent's place of business and through the internet. It is the policy of BLM, as derived from various laws including the Federal Land Policy and Management Act of 1976, to manage the public lands in a manner that recognizes the Nations need for domestic sources of minerals and other resources.

Adverse effects include minor impacts to air quality and visual resources that will occur temporarily during exploration and mining, but long term effects would be limited in scope.

- 2) *The degree to which the proposed action affects public health and safety.*

The decision to approve a mining plan of operation in itself does not affect public health and safety. Site specific environmental analysis addresses the balance of resource protection with providing semi-precious gem stones and mineral specimens to the marketplace. Public health and safety concerns have been evaluated directly under “Air Quality, Water Quality, and Wastes, Hazardous or Solid,” sections of the EA. Impact to public health and safety is expected to be minimal and therefore not significant based on the protective measures described under those sections.

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

The proposed area identified does not contain any unique characteristics and does not contain lands under special designations such as park lands, prime farmlands, wetlands, wild and scenic rivers, or ecologically critical areas.

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

The lands identified in the Proposed Action are not unique; are remote; and land uses are limited to grazing, dispersed recreation, and mineral prospecting. The land surrounding and adjoining the Sherri Ann mining claim is covered with mining claims and the proposed action is therefore not likely to be controversial.

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

There are no effects that are considered to be highly uncertain or involve unique or unknown risks as a result of mining in this area. This type of activity has occurred previously and continues to occur on other BLM lands similarly situated. As a result, the anticipated effects of such activity can be predicted with a high degree of certainty.

- 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.*

This decision is not precedent setting. Future plans of operation will be analyzed for site specific impacts when they are submitted. This decision does not represent a decision in principle about the future consideration of plans of operation. All future plans of operation would require further NEPA analysis.

- 7) *Consideration of the action in relation to other actions with individually insignificant but cumulatively significant impacts.*

The decision to approve a plan of operation on the subject land does not establish an assurance for future plans of operation from which a cumulative impact analysis can be adequately addressed. No individually or significant cumulative effects are predicted as identified in the Cumulative Impacts section of the EA.

- 8) *The degree to which the action may adversely affect districts, sites, highways, structures, or 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 historic resources.*

A Cultural Resource Inventory, consisting of Class I records search and literature review identified no historic or prehistoric resources previously recorded and found no resources eligible for inclusion on the national Register of Historic Places nor meeting any eligibility criteria. Similarly, the results of archaeological and ethnographic information on this area suggest the Proposed Action would have no effect on Native American religious concerns.

- 9) *The degree to which the action may adversely affect an endangered or threatened species or its critical habitat.*

Staff review of the Proposed Action did not identify any threatened or endangered species or their habitat.

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

To the best of my knowledge, the Proposed Action does not violate or threaten violation of any federal, state, local, or tribal law or requirement imposed for the protection of the environment.

**Determination**

This Finding of No Significant Impact is based on the information contained in the EA and my consideration of criteria for significance (40 CFR 1508.27). It is my determination that: 1) the implementation of the proposed action will not have significant environmental impacts; 2) the Proposed Action is in conformance with the Bradshaw-Harquahala RMP & EIS; and 3) the Proposed Action does not constitute a major federal action having significant effect of the human environment. Therefore, an Environmental Impact Statement is not necessary.

Approved:

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Steven Cohn

Field Manager

Hassayampa Field Office

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Date

UNITED STATES DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT, ARIZONA  
HASSAYAMPA FIELD OFFICE

EA#: DOI-BLM-AZ-P010-2011-043-EA

Proponent: The Gem Shop

Project Name: Sherrie Ann

BLM Contact Person: Michael Rice, Geologist

The Gem Shop Contact Person: Eugene Mueller, Owner

**Legal Description and Map Name:** The Proposed Action would occur in a remote area approximately 19 miles southeast of the town of Aguila, Maricopa County, Arizona. Located within the Hassayampa River Plain and lying between the Vulture Mountains to the north and northeast and the Belmont Mountains to the south and southwest, the area in question is more specifically described as being located in the SE $\frac{1}{4}$ , Section 17, T.5N., R.7W. (See Figure 1)

<b>Claim</b>	<b>AMC No.</b>	<b>Legal Description</b>	<b>I.</b>
Sherri Ann	382837	Part SE $\frac{1}{4}$ SE $\frac{1}{4}$ and NE $\frac{1}{4}$ SE $\frac{1}{4}$ of Section 17, T5N, R7W	

**PURPOSE AND NEED**

**Background:** The site of the Proposed Action lies southeast of the town of Aguila, Arizona approximately 19 road miles and is located in an area which has historically been prospected for semi-precious gem stones such as agate and specimen quality varieties of quartz. The Sherri Ann claim itself has several small prospect pits which appear to have been excavated in search of geodes or other quartz specimens.

The purpose of the proposed action is to permit the The Gem Shop to: 1) excavate several exploration trenches in order to determine the quality, extent, direction, and potential of the deposit 2) determine marketability and market demand by removing mineral specimens for sale and 3) reclaim the site after each mining campaign.

The need for the action is established by BLM's responsibility under the Federal Land Policy Management Act (FLPMA) and the 1872 Mining Law to respond to submissions of Plans of Operation pursuant to the regulations at 43 CFR 3809.

This Environmental Assessment (EA) has been prepared pursuant to section 102(2)(C) of the National Environmental Policy Act (NEPA), and in accordance with 40 CFR 1508.9, to assess the potential environmental impacts of the proposed exploration and mining operation. Based on this evaluation of alternatives and potential impacts, the Bureau of Land Management (BLM) will

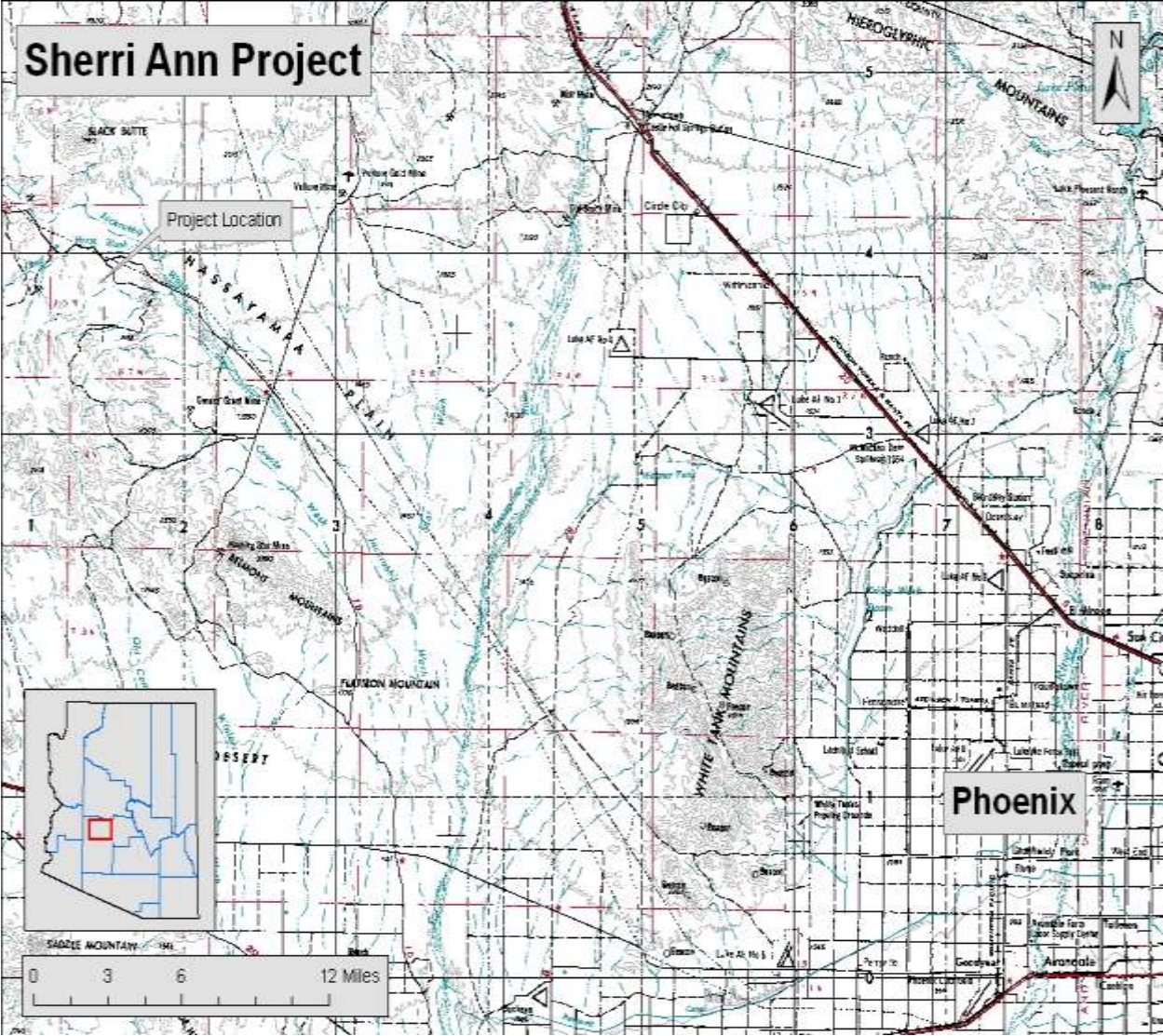


Figure 1

make a decision determining whether or not to approve the plan of operations as requested or in an amended form.

**Conformance with Land Use Plan:** The proposed action conforms to the Approved Resource Management Plan (RMP) for the Bradshaw-Harquahala RMP, Record of Decision issued in April 2010. The specific decisions relevant to which this proposed action are:

- All public lands within the planning area are open to locatable mineral activities except the Tule Creek ACEC, legislatively withdrawn areas, and other withdrawn and segregated areas (MI-3).
- The proposed action does not conflict with any Desired Future Conditions or management actions in the Bradshaw-Harquahala RMP.

**Relationship to Statutes, Regulations or Other Plans or Policies:** The BLM decision only authorizes use of BLM land. Use of non-BLM land (e.g., private land, National Forest, State Trust land) is subject to the agency or private landowners' permission. Public lands in the area are subject to the current Threatened & Endangered Species protocol and the Arizona Standards for Rangeland Health and Guidelines for Grazing Administration, approved June 1999. The regulations at 43 CFR 3715.5 require that The Gem Shop's use and occupancy of the site conform to all applicable federal and state environmental standards. The regulations at 43 CFR 3809.420(a) (6) require that The Gem Shop must conduct all operations in a manner that complies with all pertinent Federal and state laws. BLM's authorization of the Proposed Action would include the requirement that The Gem Shop comply with the 43 CFR 3715 and 43 CFR 3809 regulations.

## II. THE PROPOSED ACTION AND ALTERNATIVES

**Description of the Proposed Action:** The Proposed Action contemplates two phases; an exploration phase and a mining phase. During the exploration phase, a minimum of four exploration trenches will be excavated on the mining claim. Because the mineral deposit is irregular and varies in quality, the exact location, dimension, and number of trenches needed to define the deposit cannot be readily determined at this time. Based on rock outcrops which appear to have marketable material, exploration will initially be conducted in an area of approximately 4 acres. Depending on the results from this first exploration effort, exploration trenches may have to be excavated elsewhere on the claim either during the exploration phase or during the mining phase. An amendment to the mining plan will be required for any work beyond the 4 acre area already identified in the mining plan.

Once exploration efforts have defined a marketable quantity of material, mining will be conducted on a seasonal basis, once or twice a year with each mining campaign lasting two weeks. At some point in the operation, exploration will be conducted elsewhere on the mining claim in order to maintain a reserve of mineable material. At this point in time, both exploration and mining will be occurring on the property concurrently, and an amendment to the mining plan will be required if the area exceeds the originally proposed 4 acres. As indicated in the mining plan, there will be no more than one-half acre of land open at any given time and all disturbed areas will be backfilled,

leveled, and contoured at the end of each mining cycle. It may be necessary however, to re-enter the same site two or more times in order to mine and remove all of the material. In total, mining on the claim is expected to last for a period of three to five years.

Prior to excavating any area, the proponent will remove the top 6 inches of soil and stockpile the material as topsoil. The stockpile will then be placed back onto the disturbed area once mining of that particular site has permanently ceased. Topsoil will not be replaced at the end of any given mining cycle if the site will be re-entered during the next mining cycle.

Equipment used during the operation will consist of a Caterpillar 320 tracked excavator and hand tools for mining and a skid steer loader for reclamation. Under the Proposed Action, there would be no onsite processing facilities, but diesel fuel for refueling the excavator will be kept on site in a 55 gallon drum. The fuel drum will either be located in the back of a pick-up truck or placed on the ground. If located on the ground, the barrel will be placed on a tarp and an earthen berm placed around the perimeter. If a leak of diesel fuel should occur, it would be immediately removed with shovels and an inert absorbent material would be placed on the spill area. Additional excavation would occur to remove any contaminated absorbent material still remaining and if necessary, the procedure repeated until the area is clean. Except for emergency repairs, repairs and maintenance will be conducted offsite by the equipment rental company.

Exploration trenches and mine workings will have caution tape placed around the perimeter to warn of possible safety hazards. At present, the proponent anticipates the depth of all excavations to be on the order of four feet. Depending on the depth of excavations however, the proponent may be required to comply with OSHA and the Arizona State Mine Inspector's Office standards on this matter. To prevent potential entrapment of desert tortoise, excavations will have at least one side sloped to allow tortoise to climb out. Alternatively, excavations will be fenced with 1" or smaller mesh at least 20 inches high or be covered in such a way to prevent entry of desert tortoise.

Access to the property is from Aguila Road which intersects Eagle Eye Road approximately 5 miles south of Aguila, Arizona. From this intersection and continuing approximately 12.5 miles southeast along Aguila Road, there is an unimproved dirt road which intersects Aguila Road. Access to the mining claim is along this unimproved dirt road for a distance of approximately 1.5 miles.

**No Action Alternative:** The No Action alternative would be to not approve proposed mineral exploration and mining operation described in the Plan of Operations.

### **III. AFFECTED ENVIRONMENT AND ENVIRONMENTAL CONSEQUENCES**

#### **A. CRITICAL ELEMENTS NOT AFFECTED**

The following critical elements would not be affected by the Proposed Action or alternatives because they do not occur at the site of the Proposed Action or because of the nature of the Proposed Action:

**1. Threatened and Endangered Species:** The Endangered Species Act of 1973 requires all

Federal agencies to undertake programs for the conservation of endangered and threatened species, and prohibits from authorization, funding, or carrying out any action that would jeopardize a listed species or destroy or modify its "critical habitat".

On August 25, 2011, a BLM Wildlife Biologist visited the site and concluded that the area does not contain suitable habitat for any species currently listed as threatened or endangered on the US Fish and Wildlife Service list.

**2. Cultural Resources:** A cultural resources inventory, consisting of Class I (records search and literature review) was completed by BLM Hassayampa Field Office cultural resources personnel on August 26, 2011. The archaeological records review of the project area resulted in the identification of no historic or prehistoric resources previously recorded. The cultural resources personnel did not locate any historic or cultural resources eligible for inclusion on the national Register of Historic Places (NRHP) nor meeting any eligibility criteria, and no further avoidance and/or preservation measures are warranted in relation to the proposed undertaking (BLM comment document dated August 26, 2011).

**3. Native American Religious Concerns:** The results of the archaeological survey completed by BLM, as well as existing archaeological and ethnographic information on this area, suggest that the Proposed Action would have no effect on Native American religious concerns. The Harquahala Mountains are within the known range of the Western Yavapai. The Proposed Action would not remove any prominent visual intrusions from the viewsheds of known cultural sites in this mountain range nor will it affect other Native American religious concerns currently having been expressed to BLM on similar projects.

**4. Wild and Scenic Rivers:** No part of the Proposed Action impacts a Wild and Scenic River, a congressionally authorized study river, or water resources below, above or on a stream tributary to a designated river or congressionally authorized study river. The Proposed Action would have no effect on wild and scenic rivers.

**5. National Energy Policy:** The National Energy Policy requires an evaluation of access limitations to Federal lands in order to increase energy production. The Proposed Action is not an energy exploration or development project and has no impact on potential oil and gas exploration and development, as the area is generally unsuitable for those actions. The Proposed Action would have no effect on National Energy Policy.

**6. Wetlands/Riparian Zones:** Wetlands are protected under the Clean Water Act and different criteria are used by agencies to classify wetlands to reflect variation in statutory protection and management objectives. No identified wetlands or riparian zones are within or near the proposed project area. The Proposed Action would have no effect on wetlands or riparian zones.

**7. Prime Farmland:** The proposed project is not located on land that is currently farmed or on land that could be farmed. The Proposed Action would have no effect on Prime Farmland.

**8. Environmental Justice:** EPA defines Environmental Justice as the fair treatment and meaningful involvement of all people regardless of race, color, national origin, or income with

respect to the development, implementation, and enforcement of environmental laws, regulations, and policies. Fair treatment means that no group of people, including a racial, ethnic, or a socioeconomic group, should bear a disproportionate share of the negative environmental consequences resulting from industrial, municipal, and commercial operations or the execution of federal, state, local, and tribal programs and policies. The site of the Proposed Action has no residential population in the immediate area. The Proposed Action would have no effect on Environmental Justice.

**9. Wilderness:** The site of the Proposed Action is not located in any designated wilderness area or on any land allocated to maintain wilderness characteristics. The nearest designated wilderness area is the Hummingbird Springs Wilderness, 4.5 miles southwest of the project site. The Proposed Action would have no effect on wilderness.

**10. Floodplain:** Maricopa County Flood Control District regulates unincorporated areas lying within the 100-year floodplain, to evaluate and control the risk of possible flood damage. The 100-year floodplain is defined as the area adjoining a watercourse that would be covered by water during a flood event having a 1 out of 100 chance of occurring in any given year. The 100 year floodplain in this area has not been designated by Maricopa County. However, the Federal Emergency Management Agency has identified the project area as lying outside the 1% annual chance floodplain. Lying within Zone X, the Proposed Action would have no effect on floodplain.

## **B. CRITICAL ELEMENTS POTENTIALLY AFFECTED**

The following Critical Elements are or could be affected by the Proposed Action. The potential impacts, and the mitigation measures to be used to reduce these impacts, are discussed below.

### **1. Wildlife / Other Than Threatened and Endangered Species – Sonoran Desert Tortoise and Migratory Birds:**

On October 9, 2008 USFWS was petitioned to list the Sonoran Desert distinct population segment of the desert tortoise as Threatened or Endangered, with critical habitat under the ESA (16 U.S.C. § 1531 et seq.). On August 28, 2009, the USFWS determined the Sonoran desert tortoise warranted listing but the action was precluded by other listing actions of higher priority. On December 13, 2010, the USFWS placed the Sonoran Desert tortoise on the candidate species list, where its status will be reviewed annually.

BLM has mapped the project area as “Category II Habitat” for the Sonoran desert Tortoise. As background, in 1988, the BLM developed habitat categorization guidelines as part of its range-wide management plan for the desert tortoise (Spang et al. 1988). Desert tortoise habitat was characterized into three types (Table 1). The distinction in habitat category was based on evaluation of four criteria (Table 1); 1) importance of habitat to maintaining viable populations, 2) resolvability of conflicts, 3) desert tortoise density, and 4) population status (stable, increasing or decreasing) (Spang et al. 1988). Criterion 1 is the most important criterion in determining which category a given parcel of land falls into.

The BLM wildlife biologist visited the site on August 25, 2011 and noted the following:

“The site is moderately disturbed from previous mineral exploration. Soils appear shallow and there are areas of exposed bedrock. Dominant vegetation includes paloverde, ocotillo, buckhorn cholla, hedgehog cactus, whitethorn acacia, three-awn grass, saguaro, fishhook barrel cactus, flattop buckwheat, desert trumpet, creosote, brittlebush, ephedra and big gulleta grass. Wildlife and wildlife sign observed: cactus wren, white-winged dove, turkey vulture, black-tailed jack rabbit, desert cottontail, antelope ground squirrel, desert mule deer, curved bill thrasher, wood rat, and Arizona whiptail lizard.

The entire 20 acre claim was surveyed for desert tortoise, desert tortoise sign, and suitable shelter sites. No desert tortoises or sign were observed. Two potentially suitable desert tortoise shelter sites were observed on the claim. Both of these potential shelter sites were shallow (less than 0.5 meters deep). The area near these sites and near wood rat middens were searched thoroughly for tortoise sign (scat, eggshell fragments, carapace/plastron pieces), but no sign was observed. Based on this survey it is unlikely that this site is currently occupied by desert tortoise. However, this site is located in category II desert tortoise habitat, so tortoise likely occupy habitat in the surrounding area. Tortoises may utilize habitat within the project area periodically so to prevent direct mortality of tortoise and reduce impacts to habitat the following mitigation (exerpted from the Arizona Interagency Desert Tortoise Team *Recommended Standard Mitigation Measures for Projects in Sonoran Desert Tortoise Habitat*) should be undertaken:

- If feasible, project activities should be scheduled when tortoises are inactive (typically November 1 to March 1).
- Before driving a motor vehicle or operating machinery, project personnel should search under and around the equipment for desert tortoise.
- If a tortoise is found in a project area, activities should be modified to avoid injuring or harming it. If activities cannot be modified, tortoises in harm's way should be moved in accordance with Arizona Game and Fish Department's "Guidelines for Handling Sonoran Desert Tortoises Encountered on Development Projects", revised October 23, 2007 (attached)
- Take, possession, or harassment of a desert tortoise is prohibited by State law, unless specifically authorized by Arizona Game and Fish Department.
- Blading of new access or work areas should be minimized to the extent possible.
- Disturbance to vegetation should be minimized to the extent possible. If shrubs cannot be avoided during equipment operation or vehicle use, wherever possible they should be crushed rather excavated or bladed and removed.
- Project features that might trap or entangle desert tortoises, such as open trenches, pits, open pipes, etc. should be covered, fenced or modified to prevent entrapment. Sloping at least one side of an open pit can help prevent entrapment. Alternatively, excavations will be fenced with 1” or smaller mesh at least 20 inches high.
- To prevent attraction of predators or harmful consumption of trash by tortoise, the site should be maintained in a sanitary condition at all times.
- The project proponent should be responsible for controlling and limiting litter, trash, and garbage by immediately placing refuse in predator-proof, sealable receptacles. Trash and debris should be removed from the site.

- After completion of the project, trenches, pits, and other features in which tortoises could be entrapped or entangled, should be filled in, covered, or otherwise modified so they are no longer a hazard to desert tortoises.

**Migratory Birds:**

Migratory birds are protected under the Migratory Bird Treaty Act of 1918, as amended.

Vegetation at the site is relatively sparse, but migratory birds may nest in the area. Key species for migratory birds in the area are saguaro, paloverde, and ocotillo. Destruction of vegetation for nesting sites and foraging could negatively impact migratory birds. To the extent possible, project activities should be scheduled between August 1 and February 15 when migratory birds are not likely to be nesting. If project activities are planned during the nesting season, the area to be impacted should be surveyed for active nests by a qualified biologist prior to surface disturbance. Disturbance to vegetation should be minimized to the extent possible – especially saguaro and paloverde.

**Table 1. BLM Sonoran Desert Tortoise habitat category criteria (from AIDTT 1996)**

	<b>Category I Habitat</b>	<b>Category II Habitat</b>	<b>Category III</b>
<b>Category Goals</b>	Maintain stable, viable populations and protect existing tortoise habitat values; increase populations, where possible	Maintain stable, viable populations and limit further declines in tortoise habitat values	Limit tortoise habitat and population declines to the extent possible by mitigating impacts
<b>Criterion 1</b>	Habitat Area essential to maintenance of large viable populations	Habitat Area may be essential to maintenance of viable populations	Habitat area not essential to maintenance of viable populations
<b>Criterion 2</b>	Conflicts resolvable	Most conflicts resolvable	Most conflicts not resolvable
<b>Criterion 3</b>	Medium to high density or low density contiguous with medium or high density	Medium to high density contiguous with medium or high density	Low to medium density not contiguous with medium or high density
<b>Criterion 4</b>	Increasing, stable or decreasing population	Stable or decreasing population	Stable or decreasing population

**Impacts of the Proposed Action:** There could be short term indirect impacts from displacement of animals from the Project Area into adjacent habitats during mining activities. Due to the small area of disturbance, approximately four acres, and the short two week period in which operations would be conducted, there would be no fragmentation of the habitat from project implementation.. Vegetation at the site is relatively sparse, but migratory birds may nest in the area. Destruction of vegetation for nesting sites and foraging could negatively impact migratory birds. The level of

human activity associated with the mining project would be similar to dispersed recreation (i.e., hiking, camping, hunting, off road ATV riding) by being limited in duration and localized. The increased noise level from the mining equipment may interfere with territorial defense by birds with territories near the site. Some species would be displaced during the time that the mining occurs. This could possibly lead to some instances of direct mortality if the displaced individuals move into new habitats that already are occupied, creating intra-specific competition, or the displaced individuals would be vulnerable to predators until they become familiar with the new habitat. The level of direct mortality, if any, would be minor. Desert tortoise may be impacted through loss of habitat or direct mortality from vehicles and other equipment or entrapment in excavations.

Due to the size of the proposed disturbance and the dispersed nature of the disturbance, the project is not likely to affect migration, foraging, or other habitats for other wildlife species known to occur in the project area that are not mentioned above.

**Impacts of the No Action Alternative:** The No Action Alternative would have no direct impacts to wildlife in the project area. This alternative would not change the current wildlife habitat condition or the ongoing low level of human disturbances on local wildlife. The existing recreation use and livestock grazing would continue to have a minimal influence on wildlife use of the area. The existing impact is low due to remoteness of the area and BLM grazing management guidelines and range monitoring requirements.

**2. Air Quality:** The regulations at 43 CFR 3809.420(b)(4) require that “All operators shall comply with applicable Federal and state air quality standards, including the Clean Air Act (42 U.S.C. 1857 *et seq.*)”. BLM’s authorization of the Proposed Action would include the requirement that Aguila Ventures LLC comply with the 43 CFR 3809 regulations.

The site of the proposed action is located outside of the Maricopa County PM 10 Nonattainment Area.

**Impacts of the Proposed Action:** Direct, temporary impacts to air quality would result from exploration trenching and mining activities. However, the impacts would be transitory and temporary, limited in duration, and would end at the completion of each mining campaign. Fugitive dust, containing particulate matter, as well as gaseous pollutants such as nitrous oxides, carbon monoxide, and sulfur dioxide would be emitted as part of mining operations. Sources of fugitive dust would include personal vehicle transportation to and from the project area; the tracked excavator; and skid steer loader. Sources of gaseous pollutants would include equipment exhaust emissions from light personal vehicles and mining equipment. If fugitive dust becomes a visible problem, the operator will utilize controls such as watering main roads and/or the use of surfactants to control fugitive dust, and preventive equipment maintenance to control vehicle emissions.

All equipment would have current pollution controls as required by the EPA during manufacture. The Proposed Action would be conducted such that the standards of Maricopa County Rule 310 are met. If necessary, water would be used to control dust from vehicles. Loads of mined material leaving the site are solid and do not emit dust. With the required dust control measures, these

emissions would be well below the *de minimis* threshold. No long-term impacts to air quality are expected under the Preferred Alternative.

**Impacts of the No Action Alternative:**

There would be no transitory or temporary impact to air quality from the proposed exploration and mining plan under the No Action Alternative. Dust from the occasional recreational vehicles and livestock management vehicles would continue to be periodic low level contributors to the region's air quality.

**3. Wastes, Hazardous or Solid:** Solid wastes, including hazardous wastes, are regulated by the Resource Conservation and Recovery Act (RCRA). No hazardous waste, garbage or industrial waste problems were noted in the project area.

**Impacts of the Proposed Action:** The regulations at 43 CFR 3809.420(b)(2) require that "All tailings, dumps, deleterious materials or substances, and other waste produced by the operations shall be disposed of so as to prevent unnecessary or undue degradation and in accordance with applicable Federal and state Laws." BLM's authorization of the Proposed Action would include the requirement that The Gem Shop comply with the 43 CFR 3809 regulations. On-site activities would generate less than one cubic foot of municipal waste per week, consisting of lunch waste, empty cans and other similar waste. This waste would be removed to an off-site waste transfer station on a regular basis and would not be allowed to accumulate. Hazardous substances including flammable liquids (gasoline and diesel fuel) would be used in the proposed mining operation. If a leak of a hazardous fluid were to occur it would be immediately removed with shovels and an inert absorbent material would be placed on the spill area. Additional excavation would occur to remove any contaminated absorbent until the spill area is clean. Equipment maintenance except for emergency repairs such as tire changes would be done at off-site repair and maintenance facilities. No known industrial or other wastes would be generated or accumulated. No hazardous waste would be generated on-site. The impacts from waste, hazardous or solid would be minimal and within all legal limits.

**Impacts of the No Action Alternative:** The No Action alternative would have no effect on solid and hazardous waste generation.

**4. Water Quality, Drinking or Ground:** The State of Arizona is authorized by the Environmental Protection Agency (EPA) to issue its own version of the EPA's National Pollutant Discharge Elimination System MSGP for Industrial Activities, namely, the Arizona Pollutant Discharge Elimination System (AZPDES) Storm Water Multi-Sector General Permit (MSGP) for Industrial Activities. The Arizona Department of Environmental Quality (ADEQ) requires operators to obtain an Aquifer Protection Permit (APP) prior to the disturbance of pre-existing mill tailings. Section 404 of the Clean Water Act prohibits dredging or filling of jurisdictional waterways without a permit from the US Army Corps of Engineers. The regulations at 43 CFR 3809.420(b)(5) require that "All operators shall comply with applicable Federal and state water quality standards, including the Federal Water Pollution Control Act, as amended (30 U.S.C. 1151 *et seq.*)". BLM's authorization of the Proposed Action would include the requirement that The Gem Shop comply with the 43 CFR 3809 regulations.

The area is dry, receiving about 10 inches of precipitation in a normal year. Storms can bring enough rain to cause release of fine sediments from the property.

**Impacts of the Proposed Action:** Due to the use of existing roads, gently sloping topography, and near solid rock surfaces, there would be minimal change in water quality on or off the site in the form of siltation from roadbed runoff or from mining. Because the area of disturbance is less than 5 acres; is not located within 0.25 miles of an impaired or outstanding Arizona water; and has an erosivity value less than 5, the exploration and mining project is subject to a waiver option provided in the Construction General Permit. Therefore, no Storm Water Pollution Prevention Plan (SWPPP) is required.

**Impacts of the No Action Alternative:** No direct impacts to water resources would occur upon implementation of this alternative. The area would over time continue to release small quantities of fine materials from roads into local washes during and shortly after rain events. Sediments to water courses would continue to be an indirect effect of erosion currently caused by the recreational traffic within the area under the No Action Alternative.

**4. Noxious Weeds:** On February 3, 1999, Executive Order 13112 was signed, requiring Federal agencies whose actions may affect the status of invasive species to use relevant programs and authorities to: (i) prevent the introduction of invasive species; (ii) detect and respond rapidly to and control populations of such species in a cost-effective and environmentally sound manner; (iii) monitor invasive species populations accurately and reliably; (iv) provide for restoration of native species and habitat conditions in ecosystems that have been invaded; (v) conduct research on invasive species and develop technologies to prevent introduction and provide for environmentally sound control of invasive species; and (vi) promote public education on invasive species and the means to address them; and not authorize, fund, or carry out actions that it believes are likely to cause or promote the introduction or spread of invasive species.

No noticeable areas of noxious weeds were detected on site during field observations.

**Impacts of the Proposed Action:** Although unlikely, the Proposed Action could have a minor impact if seeds from noxious weeds are transported by vehicle chassis or clothing. Any weeds that can germinate in the area would be removed as part of a weed and fire fuel control strategy. Because vehicles would remain on previously disturbed ground that is not currently growing any significant vegetation due to the high rock content, virtually no impact would be expected.

**Impacts of the No Action Alternative:** Since the project area does not currently have noxious weeds, it appears that the No Action alternative has not had an impact to date. This may be due to the thin immature soil development and rock outcrop covering the project area. This alternative would not have any impact on noxious weeds.

**5. Recreation and Travel Management:** The general area is used by the public for dispersed recreational activities, including horseback riding, off-highway vehicle (OHV) recreation, hunting and camping. There are no known horse trails within the project area although there is a non-maintained dirt road leading into the project site.

**Impacts of the Proposed Action:** The exploration disturbance areas associated with the project could result in a short-term, temporary reduction of recreation opportunities for hunters, OHV users, hikers and rock collectors. In the long term, pre-mining recreation activities would be expected to return to the area at the conclusion of exploration.

Exploration and mining activities could create disturbances that may interfere with recreational pursuits within the area. The sight and sound of exploration activities would diminish the solitude, naturalness, primitive and unconfined recreation opportunities desired by many outdoor enthusiasts. However, the existing disturbance characteristics of the area are likely not to attract those who are looking for a natural and primitive recreational experience. There are abundant and better opportunities for this type of experience throughout the region. Those who choose recreational experiences within the project area are likely choosing it to view the mining disturbances. The proposed exploration program would not change the long term existing access to public lands within the project area for recreational uses. Some recreationists may temporarily cease using certain areas due to mining activities. There are no known annual commercial or competitive Special Recreation Permit events occur within this area, so there would be no conflicts between organized recreation events and mining activities.

Indirect impacts may occur as a result of the mining activity due to an increased noise level during mining activity that may decrease the quality of the recreational activity. Residual impacts to recreational land use are not anticipated.

**Impacts of the No Action Alternative:** Under the no action alternative there would be no change to existing recreational opportunities.

**6. Visual Resources Management (VRM):** Under the existing land use plan, the project area is classified as Class II for visual resources. The objective is to maintain or improve the existing landscape character. Management activities may be seen but should not attract attention to the casual visitor.

**Impacts of the Proposed Action:** The proposed action would not impact visual resources except during the days of actual exploration and/or mining where the tracked excavator and personal vehicle would be visible. This impact would be temporary and transient in nature. The area would look very similar after reclamation is completed and would not attract attention to the casual visitor. The proposed action meets the VRM objectives of the plan.

**Impacts of the No Action Alternative:** Under the no action alternative there would be no change to visual resources.

**7. Special Designations:** The site of the Proposed Action is not located on land with any Special Designation.

**8. Cumulative Impacts:** Cumulative impacts are the impacts on the environment which result from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions, regardless of what agency (Federal or non-Federal) or person undertakes such other actions. Cumulative impacts can result from individually minor but

collectively significant actions taking place over a period of time (40CFR1508.7).

**Cumulative Impacts of the Proposed Action:** The Proposed Action would not change the existing impact of inactive mining in the general area. There are no active claims elsewhere in the entire township and there is no active exploration or mining on state land within a two mile radius of the project area. There are some rights-of-way on state and BLM land in the general area of the proposed action, but those uses are expected to continue at the same level with no perceptible increase in impacts from the proposed action. The Proposed Action would add 1 personal vehicle, per work day onto nearby Eagle Eye Road for a period of approximately two weeks. Cumulative impacts, if any, would be to visual resources and the quality of the recreational experience. Recreational opportunities, such as OHV and camping, would remain the same except during the two week period actual exploration or mining was taking place.

**Cumulative Impacts of the No Action Alternative:** Under the No Action alternative the site would have no cumulative impacts.

#### **IV. INDIVIDUALS, ORGANIZATIONS AND AGENCIES CONSULTED**

BLM Specialists and Project Proponent were consulted during preparation of this EA.

#### **V. LIST OF PREPARERS/REVIEWERS**

**Bureau of Land Management, Phoenix District Office, Planning & Environmental Coordinator Leah Baker**

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**Bureau of Land Management, Hassayampa Field Office, Realty Specialist, Jim Andersen**

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## Appendix 1

### Environmental Assessment DOI-BLM-AZ-P010-2011-043-EA Performance Measures for AZA-35644

**1. Facilities and Equipment:** All facilities and equipment on a mining claim or millsite must be appropriate and reasonably incident to prospecting, mining, or processing operations. All equipment and facilities must be presently operable, subject to the need for reasonable assembly, maintenance, repair, or fabrication of replacement parts. Facilities, methods and equipment must be appropriate to the terrain, mineral deposit, and stage of mineral development. BLM will utilize the Compliance Assessment - Safety, Health, and the Environment Protocol Manual for the Bureau of Land Management and/or the Safety and Health Management BLM Manual Handbook (H1112-1) for guidelines for the inspection of facilities (excluding residential facilities) on a mining claim. All structures used and/or occupied by a mining claimant or operator must be noted in the 3715 filing. Any structures that existed before the subject regulations, not claimed on a 3715 filing may become, at the discretion of management, the property of the United States. If an operator/claimant claims the right to possess and use a pre-existing building on his/her claim, and if this structure is determined by BLM to be historically significant, BLM may require the operator/claimant to restore the structure to its original condition. If at any time, reasonably incident activities cease, and inspections by BLM personnel reveal that observable on-the-ground activities have stopped, BLM may terminate the concurrence and order all or part of the use and occupancy to stop and be removed from the public lands. Single structures for the storage of compatible chemicals and housing of equipment or supplies will be encouraged over the use of several small outlying structures when practical. Temporary structures such as tents, campers, or trailer homes will be encouraged over the use of permanent structures such as buildings, homes or cabins. When practical, you must use flat lying areas, with low erosion potential, as the preferred site for all facilities. All operations must have at least one (1) ABC type fire extinguisher on site at all times. BLM's written concurrence for the occupancy must be kept on the mine property and presented to any BLM personnel requesting to see it. All operations must be kept neat, clean and free of debris. The facilities must present a safe work environment for the employees and facilities must be constructed to meet all applicable electrical, mechanical, safety and public health codes and/or regulations. All operations must be conducted in strict accordance with Occupational Safety and Health Administration (OSHA) and Mine Safety and Health Administration (MSHA) regulations and the Arizona Mining Code administered by the Arizona State Mine Inspector (SMI).

**2. Vehicles:** All automobiles and motor homes on mining claims or millsites must have current registration. All off-highway motor vehicles (any motorized vehicle when operated off of highways on land, water, snow, or ice) must have current registration if used on roads outside of the mining claim. BLM off-highway vehicle designations must be followed outside of the mining claim. In addition, the claimant or operator will allow no vehicle or piece of equipment to be parked or positioned in a way that impedes the normal flow of traffic.

**3. Structure Condition:** The exterior of all buildings (including roofs) and trailers on public lands

and other related outdoor structures must be in good physical condition, well maintained, well painted or otherwise treated to protect against deterioration and kept clean and in good repair. BLM may specify paint colors to limit visual impacts. The operator is responsible to insure that all structures meet State, county, or local electrical, mechanical, safety and public health codes.

**4. Chemical Storage:** All chemicals must be stored, according to Department of Transportation standards, in approved containers with proper labeling. Rusted, dented, leaking or otherwise damaged containers must be removed from the public lands. All buildings used for the storage of chemicals must be placarded and storage of reagents in quantities exceeding a 14 day supply will not be allowed. Chemical and fuel storage facilities on public lands must be used to store only those chemicals and fuels essential for mining, milling, and processing operations occurring on the public lands. Incompatible chemicals must be protected from each other and stored in a manner that does not present a hazard. All operations must be conducted in strict accordance with Occupational Safety and Health Administration (OSHA) and Mine Safety and Health Administration (MSHA) regulations and the Arizona Mining Code administered by the Arizona State Mine Inspector (SMI). Operators must submit a complete list of all the chemicals they plan to store on their claims or millsites with Material Safety Data Sheets. BLM through its inspection program, will monitor operations to see that only essential chemicals, in appropriate quantities, are stored on site.

**5. Fuel and Petroleum Product Storage:** All petroleum product storage tanks and barrels, placed above ground, must be in a bermed area. The bermed area must be lined with an impervious lining. The bermed area must be able to contain 110% of the capacity of the tank(s) and/or barrels. Facilities that store 1320 gallons of oil or more or 660 gallons in a single tank must have a Spill Prevention Control and Countermeasures Plan (SPCC) 40 CFR 112.20 (a). These plans must be developed and then approved by a registered professional engineer. The SPCC plan must determine if the facility can cause “substantial harm to the environment”. If it does, then a Facility Response Plan is also required.

**6. Mobile Homes:** No permanent foundations will be erected for mobile homes. No mobile home will have an enclosed deck or add-on room. Porches may be installed, but any porch will be easily removable from the mobile home. Porches will not be enclosed with any material, except for screening. Roll-up sunshades are also permitted. Mobile homes must have at least 10 feet between them.

**7. Authorized Number, Types and Uses:** The mine operator will not exceed the number or type of structures specified in the approved 3715 filing. All structures must be removed within the time frames stated in the 3715 filing. The operator/claimant must furnish the BLM a copy of the Aquifer Protection Permit before operations begin, whenever an APP is required.

BLM will coordinate with the claimant or operator to ensure that the number of people required to reside on a mining claim or millsite will be sufficient to perform the tasks of mining and/or milling and to provide for site security. BLM will also work with the claimant or operator to insure that only the number of people required for operations and site security will be in residence (making a home) on the claim at any time. Based on this consultation and the subsequent environmental analysis, BLM will specify the maximum number of people, including family members, that can

reside on the claim for more than 14 days in any 90 day period.

**8. Beginning operations:** As required by Titles 18 and 27 of the Arizona Administrative Code, the claimant or operator must submit a “Notice of Start-up, Move, or Stop for Portable Equipment and Mine Operations” whenever operations begin, move or are suspended. It is the operator’s responsibility to send BLM a copy of the written notification from the Arizona State Mine Inspector that this form was received.

**9. Tanks:** Liquid Petroleum Gas storage, used for household purposes, will not exceed one hundred and twenty five (125) gallons at each mobile home, cabin, or house. Each tank will be installed, mounted, and maintained in a way that meets all applicable safety code provisions. At a minimum this means chained to the structure.

**10. Appliances and Yard Furniture:** Except water softeners, evaporative coolers and air conditioners, no household appliances of any kind will be installed or stored outside of a structure. Only furniture designed and constructed for exterior use is permitted outdoors. Tables, grills, and fire-containing devices will be repaired as necessary to assure proper function, rigidity, support and appearance.

**11. Fire Prevention:** Consistent with all applicable laws and subject to reclamation, vegetation must be cleared for a minimum distance of:

- 30 feet from all structures.
- 15 feet from any site on which a fire will be built and flammable ground litter must be cleared for at least a 5 foot radius around the fire.
- 15 feet from any site where welding, grinding, or any other spark producing operation will be performed.

Spark arrestors must be used on chainsaws, quad-runners and motorcycles.

**12. Grounds:** Grounds will be well maintained, safe, uncluttered, and free of litter and debris. All operations will provide a clean, and maintained view for the public from any roadways or thoroughfares by which the public may approach or pass mining operations on BLM lands.

**13. Pets:** Nonessential animals and/or free-roaming pets or animals are not allowed.

**14. Waste and Sewage Handling and Removal:** The term "waste" as used herein means all discarded matter including, but not limited to human waste, trash, garbage, refuse, petroleum products, ashes and equipment. Refuse will be stored in receptacles that have covers and lids, are painted, undented, waterproof, and both vermin and raven proof. Wastes will be disposed of in accordance with local laws. This should be an ongoing effort and unused equipment, trash, refuse, and litter should be removed periodically to maintain the highest aesthetic standards achievable during mining operations. The mine operator will provide an effective system for the collection and disposal of garbage and trash. This will be done by contracting with a trash removal firm, or with appropriate public entities, or through the operator himself or any combination of these methods as directed by the Field Manager. Wastes shall be disposed of in a

sanitary landfill unless otherwise approved by the Field Manager.

All sewage treatment facilities will be constructed and operated in accordance with all necessary permits utilizing accepted engineering practice and procedures. The operator/claimant must have a septic permit from the county in which the septic system is located before the system can be operated.

**15. Public Signs:** Public signs for which the operator is responsible must be appropriately located, accurate, attractive and well maintained. Permanent signs will be prepared in a professional manner, consistent with BLM standards and must be approved by BLM before installation.

**16. Mine Wastes:** If mined materials are removed from the public lands for processing, it will be the responsibility of the claimant or operator to insure that wastes generated in processing these materials are not hazardous materials or toxic wastes, if such wastes are to be returned to the public lands for disposal. BLM, at the discretion of the Field Manager, may require sampling of the wastes and subsequent analytic procedures to verify that such wastes are not hazardous materials or toxic wastes. The claimant or operator will pay the costs of sampling and analytic procedures.

**17. Explosive Storage:** All explosive storage, regardless of the class of explosive or the amount stored inside the magazine, shall meet the requirements of the Arizona Revised Statutes Title 27.

**18. Fences:** BLM will attempt to keep the public lands open to public entry at all times. But, where public health and safety is a primary concern or it is essential that access be limited to protect valuable mining equipment or supplies from theft or loss, BLM will authorize the placing on public lands of fences, gates, and signs to limit public access. Where public safety is a paramount concern, BLM may, at the discretion of the Field Manager, use administrative procedures to formally close the lands to public entry using the procedures specified by 43 CFR 8364.

Where fences, gates, and signs must be built and maintained for site security or for public safety, the BLM will determine, through a site inspection that such enclosures are reasonable. Should the claimant or operator be ordered to build and maintain fenced enclosures or post signs by either MSHA, OSHA or the SMI, the claimant must provide written proof of such an order to BLM before authorization is given and actual construction can begin. All fences and gates will be constructed to protect livestock and wildlife in the area. Exact specifications for fences and gates will be developed on a site-specific basis using information obtained in the biological assessment performed by BLM. Minimum requirements for fences are in the BLM Manual Handbook H-1741-1, Fencing.

Whenever fences, gates, or signs are placed on the public lands, BLM, will require the claimant or operator to post public directions on the fence or gate showing routes to public lands around or behind the fenced enclosure. The exact nature of the posting to be used will be decided on a case by case basis by the Field Manager. Whenever locked gates are used, BLM will require the claimant or operator to give BLM a key or use a system of double locks.

**19. Reclamation:** Regulations at 43 CFR 3809.1-1, require that all operations will be reclaimed.

Occupancy site reclamation will include, but is not limited to, complete removal of all structures, regrading, replacement of topsoil or growth medium and establishing native vegetation to establish a diverse, effective, and permanent vegetative cover to reflect the post mining land use. All reclamation operations will be conducted in accordance with the BLM Solid Mineral Reclamation Handbook (H-3042-1).

**20. Mitigation Measures:** Aguila Ventures LLC would be required to comply with the Performance Measures outlined by BLM and found in the Finding of No Significant Impact (FONSI) for this document (Appendix 1). Aguila Ventures LLC would also be required to comply with the Performance Measures listed at 43 CFR 3809.420, as well as all applicable Federal and state environmental regulations.

Before beginning operations, Aguila Ventures LLC would be required by 43 CFR 3809.412 and §3809.551 to provide and maintain an acceptable reclamation bond and financial guarantee to BLM. Reclamation would be deemed successful when the site is returned to its approximate pre-exploration drilling condition.

### **Actions and Activities Not Allowed**

The cultivation of crops and establishment of garden plots.

Activities including animal maintenance or pasturage. This includes the construction of corrals, chicken coups, kennels and stables.

The development of small trade or manufacturing concerns, hobby and curio shops, cafes, tourist stands, and hunting and fishing camps.

The storage, treatment, processing, or disposal of non-mineral, hazardous or toxic waste that are generated elsewhere and brought onto the public lands.

Any activities involving recycling or reprocessing of manufactured material such as scrap electronic parts, appliances, photographic film, and chemicals.

Searching for buried treasure, treasure trove or archeological specimens is strictly prohibited by the subject regulations.

Blocking access to the public lands through the placement of berms, wire cables, stones, vegetative debris or other materials placed on roads constructed on public lands.

Living in abandoned busses, truck trailers, other abandoned vehicles, adits, tunnels or caves.