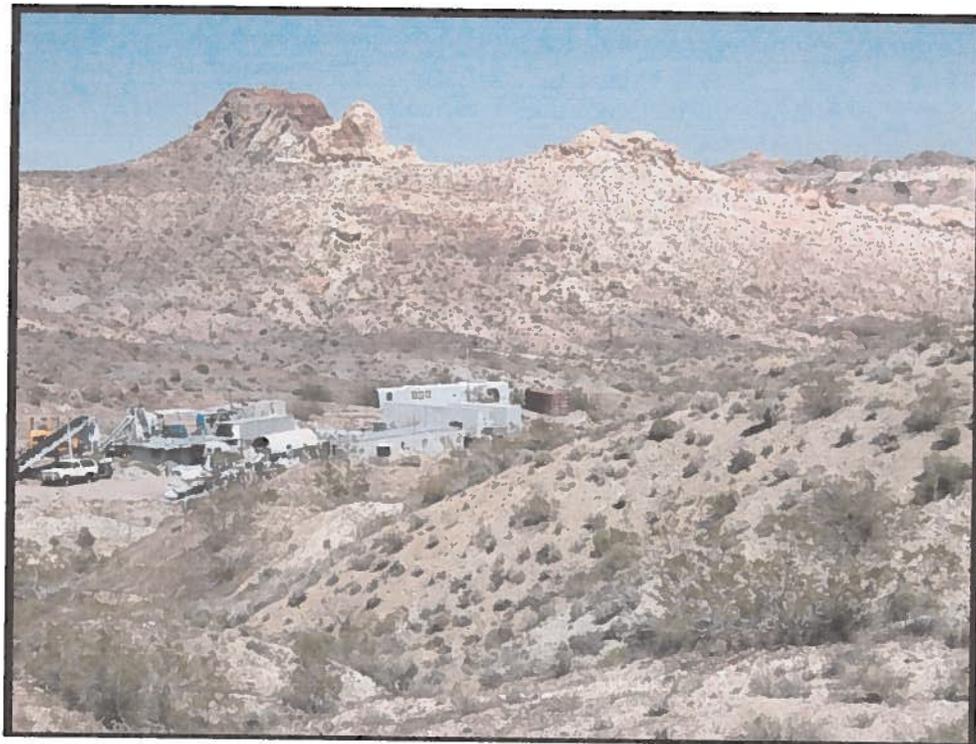


**ENVIRONMENTAL ASSESSMENT**  
**JACKPOT MINE/PATSY MINE, CLARK COUNTY, NEVADA**

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**May 2011**

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## 1.0 INTRODUCTION

This document was prepared under the oversight of the Department of the Interior, Bureau of Land Management, Las Vegas Field Office, with the National Environmental Policy Act (NEPA) and other relevant Federal and State laws and regulations. This Environmental Assessment (EA) provides an analysis of the potential environmental impacts related to a No Action Alternative, and operation, maintenance and reclamation of a surface mine and beneficiation facility to extract gold and silver from ores obtained on-site. The facility is located in southern Clark County, Nevada.

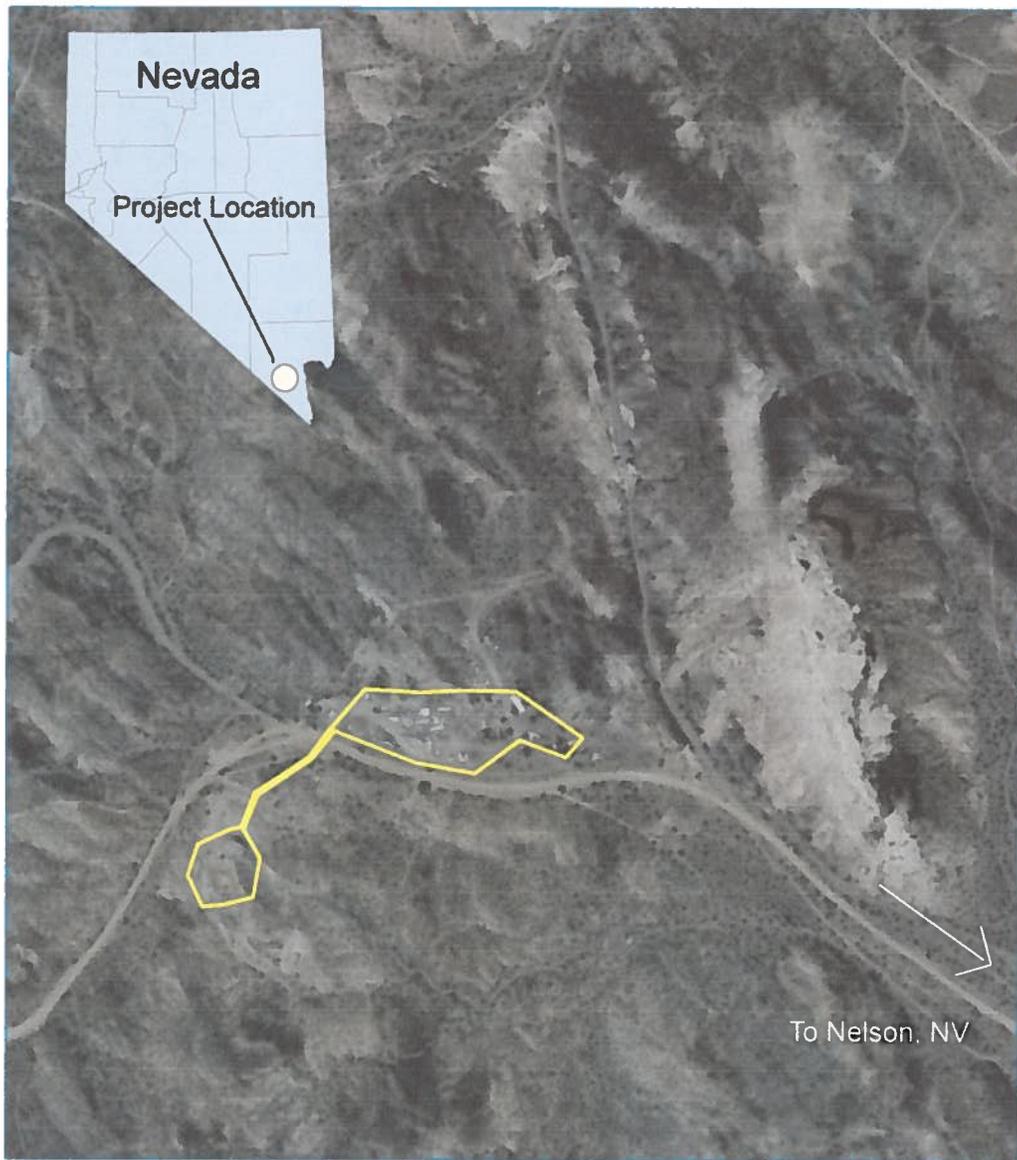
The Jackpot/Patsy Mine and processing facility was established in 1934. Project owners, Krause Thacke Mining and Minerals, LLC (KTM&M), have submitted a new Plan of Operations (Plan) including a Reclamation Plan, to the BLM (serialized as N-87919), with the goal to mine and process materials both on and off site, and continue site reclamation activities originally initiated between late 2008 and early 2009, and as modified in the new Plan.

The BLM must review and approve the proposed Plan under their Federal statutory mandates and resource management objectives [30 U.S.C. § 21-54; 43 U.S.C. § 1701 section 302(b); 43 U.S.C. § 1732[b] and 603[c]; 43 CFR 3802 and 3809] as it has responsibility for management of public lands and resources for present and future generations and ensuring that mining, processing and reclamation activities are conducted so as not to result in unnecessary or undue degradation of the public lands. BLM approval of the proposed Plan is not a major Federal action and therefore an EA is the appropriate NEPA documentation. This EA was designed to provide the BLM with information needed to determine whether or not the Proposed Action is an undertaking that would require detailed analysis in an Environmental Impact Statement, or would result in the issuance of a Finding of No Significant Impact.

### 1.1 Project Summary

KTM&M proposes to initiate a new phased surface mining (excavation trench) and physical separation process utilizing gravity, to extract a maximum permitted production rate of 36,000 tons of gold and silver from ores obtained on-site over an initial five year period. The facility is located on public land in south central Clark County, approximately 24 miles south (by air) of Boulder City and 1.5 miles northwest (by air) of Nelson (Figure 1. Project Location).

The facility, which encompasses 4.91 acres, is comprised of a mine and production facility consisting of a stockpile pad, coarse and fine crushing and screening plants (with associated feed bins and conveyors), a concentrating table, and several tanks for water collection, clarification and recycling back into the process. The Jackpot/Patsy Mine Project (JPMP) consists of bench excavation of gold and silver ores which are crushed and concentrated using a gravity separation method both on and off site. The tailing fraction is transported to a waste rock disposal facility for temporary stockpiling until it is returned to the excavation trench as backfill. Facilities are required to be designed, constructed, operated and closed without any discharge or release in excess of those standards established in regulation except for meteorological events which exceed the design storm event. A detailed description of the mining and separation processes is provided in Section 2.1, Proposed Action.

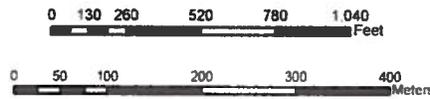


**Legend**

— Project Boundary

Source: Bing Maps

### Jackpot/Patsy Mine Project Location

NewFields Environmental  
Planning and Compliance, LLC  
April 2011

Figure 1. Project Location

**1.2 Purpose and Need**

The purpose of the JMPM is to continue to profitably recover gold and silver resources from the proposed project area utilizing, to the extent practical, existing facilities at KTM&M's currently permitted operations. The proposed project need is to meet the prevailing market demand for gold and silver.

## 2.0 ALTERNATIVES INCLUDING THE PROPOSED ACTION

This section describes the proposed action, and the no-action alternative to mining and processing ores obtained on-site at the JPMP facility.

### 2.1 Proposed Action

KTM&M submitted a new Plan to mine (excavation trench) and process (physical separation utilizing gravity) gold and silver ores at a maximum permitted production rate of 36,000 tons of ore per year at the JPMP facility, which is located on BLM administered lands. The project area is located on public land in south central Clark County, Nevada, within a portion of Sections 32 and 33, Township 25 South, Range 64 East; and Section 5, Township 26 South, Range 64 East, Mount Diablo Baseline and Meridian, approximately 24 miles south (by air) of Boulder City and 1.5 miles (by air) northwest of Nelson (see Figure 1.).

Previous activity at the site was under a Notice Level Operation (under 5 acres of disturbance), serialized as N-71698, during which the site deteriorated and expanded beyond 5 acres of disturbance. Between late 2008 and early 2009 KTM&M began a substantial clean-up and reclaimed the vast majority of the site. Due to the history of the site and its degradation, and in order to initiate a new phase of mining and beneficiation, KTM&M was required to submit a Plan even though the proposed total acres of physical disturbance would encompass only 4.91 acres. This is the first phase of a proposed multi-phased operation.

The proposed project area is divided into two main areas: the M Hill mine workings and the processing area. The new Plan proposes to mine out a portion of M Hill which would involve removing a wedge of material on M Hill between existing historic (pre-1981) trenches, thus creating a modified pit which is open on its two ends and one flank. The pit design would consist of three 20 foot high benches (in addition to the pit floor) with a bench width of 15 feet. Material from the pit would be removed down to the elevation of the existing access road to the hill. The total disturbance would be approximately 200 feet across and down to a depth of 57 feet constituting approximately 2.2 acres.

Approximately 175,000 tons of material would be extracted and processed through a crushing circuit and concentrated using a gravity separation method. Waste rock constitutes approximately 151,000 tons and the concentrate is approximately 24,000 tons. Crushing would initially commence with a maximum monthly output of 360 tons. If the material is found to be easier to extract and mining cycle times are shortened, then crushing could increase to a maximum of 3,000 tons per month—the maximum of the existing crusher capacity. The mined material would be crushed to minus 1/10th of an inch in size and be fed to a water separation table (Wilfley Table) to concentrate the minerals. All tails and waste rock would be stored in a waste rock dump facility (WRDF) with a capacity of 200,000 tons. As mining continues from M Hill, waste rock would be transported back to mined out portions of the pit to backfill. The crushing, processing and waste rock disposal area would constitute approximately 2.7 acres. Concentrate would be shipped via highway trucks to a KTM&M-owned mill site in Arizona.

Heavy equipment on site would consist of a front end loader, or FEL, a bulldozer, a water truck and a backhoe. The dozer would push and break up material from M Hill. As mining continued and space in the pit opened up, the FEL would deliver a bucket load of mined material to the

crusher and return with a bucket load of waste rock to backfill the pit area. One FEL would transport material to the crushing facility across a county maintained RS2477 road (A60AK). Safety berms approximately half wheel height would be constructed for safety at M Hill and the process facilities. Mine life of this phase is anticipated to be 5 years.

There are approximately 6.36 acres of existing roads that will be used for the JPMP operations. The Access Road (also referenced as Wash Area Road or Old Nelson/Las Vegas Road) is 11,088 feet long and has a surface width of 16 feet and a disturbance width of 20 feet (per SRCE). It is assumed that this road has been in public use for more than 100 years and will continue in use after mine closure. The Jackpot Road (also referenced as Mine Area Access Road) is approximately 6,500 feet in length and was originally a wagon haul road on relatively undisturbed land. No new culverts will be developed during the proposed JPMP.

The facilities' design has included controls to prevent and/or minimize erosion and degradation of the natural environment. It is KTM&M's intent that reclamation activities, including revegetation and groundwater quality monitoring, should run concurrent during active operations. Vegetation disturbances and subsequent revegetation would be addressed with the appropriate temporal (early spring or late fall) application of indigenous seeds and plants cultivated on-site in the 40+ year old JPMP nursery facility, recontouring and/or avoidance of existing growth medium.

Best Management Practices (BMPs) would be utilized to control air borne particulates, to ensure slopes stability and to ensure noxious weeds are not spread into or out of the project area. KTM&M would comply with appropriate local, state and federal air quality permitting/regulations. Dust control on site would include water trucks and spray lines. No chemicals will be used in the mining or extraction process and no fluids (with the exception of a 2,000 gallon water storage tank for dust control) will be stored or impounded during operations. There are no tailings ponds, process ponds, heap facilities or other non-tailing impoundments proposed for the JPMP.

Prior to the beginning of on-site activities, a Storm Water Pollution Prevention Plan (SWPP) will be developed and implemented to address storm water runoff from construction through completion of closure of the site. Prevention of soil erosion and sediment loading, and diversion of surface waters to reduce the potential for run-on are addressed with a valid Water Pollution Control Program (WPCP) permit as well as diversion ditches (approximately 0.4 acres with silt fences, straw bale dams and loose rock rip-rap at outlets) designed to prevent run-on to the pit/trench, WRDF, crusher pad, and guard station parking area. Ditches will be left in place and seeded as part of the post-mining surface water control system. Groundwater monitoring will consist of a semiannual sampling of make-up water for Nevada Profile I constituents, including arsenic, barium, cadmium, chromium, lead, mercury, selenium, silver, antimony, copper, zinc, and nitrate.

A Monitoring Plan will be developed to include all environmental monitoring required by the Plan and various permits for the JPMP. Phase 2 would consist of an exploration program and would be submitted at a later date for review and approval while mining occurred during Phase

1. All subsequent submitted phases would be reviewed as Mine Plan Modifications with appropriate NEPA evaluations.

**2.2 No Action Alternative**

Under the No Action Alternative, the operation, maintenance and reclamation of the surface mine and beneficiation facility to extract gold and silver from ores obtained on the JPMP site would not occur. KTM&M would not be able to continue to profitably recover gold and silver resources from the JPMP.

### 3.0 AFFECTED ENVIRONMENT

The affected environment is the baseline describing the existing conditions of each resource being examined. This section identifies and evaluates environmental changes resulting from the Proposed Action and No Action Alternative.

#### 3.1 Resources Considered and Eliminated from Detailed Consideration

The Council on Environmental Quality (CEQ) regulations (40 CFR 1501.7 (a) 3) specifically requires that environmental documents:

*Identify and eliminate from detailed study the issues which are not significant or which have been covered by prior environmental review (Sec. 1506.3), narrowing the discussion of these issues in the statement to a brief presentation of why they will not have a significant effect on the human environment or providing a reference to their coverage elsewhere.*

In compliance with that directive, BLM environmental staff separated the issues into substantive and non-substantive groups (Table 1.). Substantive issues were defined as those with impacts to resources directly or indirectly caused by implementing the Proposed Action. An issue or resource would be considered non-substantive if it was: (1) outside the scope of the Proposed Action; (2) already decided by law, regulation, another NEPA document, or other higher level decision; (3) irrelevant to the decision to be made; or (4) conjectural and not supported by scientific or factual evidence.

In compliance with 40 CFR 1501.7 a (3), the following resources were eliminated from detailed evaluation and the rationale for their elimination is presented below:

##### 3.1.1 Access and Transportation

Access was considered and determined to be not relevant to this analysis because operation and maintenance of the JPMP would not restrict access along public routes. Existing main or secondary access roads will be utilized during construction, operation or maintenance activities associated with the proposed JPMP. Therefore, no further investigation is required.

##### 3.1.2 Air Quality

The Clark County Department of Air Quality and Environmental Management (CCDAQM) regulates and permits construction activities that generate air pollutants and fugitive dust within Clark County. In fulfilling this responsibility, the CCDAQM often requires implementation of mitigation measures. Detailed consideration of impacts on air quality were not deemed necessary to this analysis because BMPs would be utilized during operation and maintenance of the JPMP, including but not limited to, appropriate dust mitigation measures implementation and dust permits obtained and complied with. Currently there are no emission limits for suspected Greenhouse Gas (GHG) emissions, and no technically defensible methodology for predicting potential climate changes from GHG emissions. However, there are, and will continue to be, several efforts to address GHG emissions from federal activities, including BLM authorized uses. Therefore, no further investigation is required.

**Table 1. Potentially Affected Resources**

Identified Resource	Substantive Potential Impact Identified	
	Yes	No
Access and Transportation	-	X
Air Quality	-	X
Biological Resources	X	-
Cultural and Paleontological Resources	-	X
Environmental Justice	-	X
Farmlands (Prime or Unique)	-	X
Fire/Fuels Management	-	X
Floodplain	-	X
Native American Religious Concerns	-	X
Noise	-	X
Noxious Weeds/Invasive Species	-	X
Public Health and Safety	-	X
Recreation	-	X
Socio-Economics	-	X
Soils	-	X
Visual Resources	X	-
Waste (Hazardous or Solid)	-	X
Water Quality (Surface/Ground)	-	X
Wetlands/Riparian Areas	-	X
Wilderness/Wilderness Study Areas	-	X

### 3.1.3 Cultural and Paleontological Resources

These resources were not considered for detailed evaluation because the effects would be irrelevant to the decision to be made since no cultural or paleontological resources occur within or near the proposed project area. The BLM Archaeologist conducted a reconnaissance level inventory of the proposed project area on July 8, 2010. No cultural materials were noted within the area of potential effect (APE). Portions of the APE have been previously disturbed; however, no historic properties are present. No further evaluation is necessary unless the scope of the undertaking changes. No fossil bearing strata will be impacted by the proposed project. Therefore, no further investigation is required.

### **3.1.4 Environmental Justice**

Detailed consideration of environmental justice effects was not deemed necessary in this document because no minority or low-income communities occur within or near the proposed project area. There will be no disproportionately high or adverse effects to the health or environment of the adjacent communities of Nelson, Searchlight or Boulder City if this project is approved because KTM&M would apply appropriate measures to ensure that the health and environment of these communities is protected. These measures would include BMPs to protect the air and water quality from construction activities. Therefore, no further investigation is required.

### **3.1.5 Farmlands (Prime or Unique)**

This resource was not considered for detailed evaluation because effects would be irrelevant to the decision to be made since no Farmlands (prime or unique) occur within or near the proposed project area. Therefore, no further investigation is required.

### **3.1.6 Fire/Fuels Management**

Detailed consideration of fire management practices was not deemed necessary in this document because it is not a CEQ requirement. Construction and operation equipment would be equipped with fire extinguishers and functioning mufflers to ensure that sparks do not ignite desert vegetation. No fluids will be used as part of this process except for clean water for dust control. The proposed site will house a 2,000 gallon tank for water storage. KTM&M will abide by all seasonal fire restrictions that apply, and report all fire occurrences that threaten or are adjacent to BLM lands to dispatch office. KTM&M will maintain vegetation, weed populations, or other flammable debris so as not to present an undue fuel hazard. Therefore, no further investigation is required.

### **3.1.7 Floodplain**

This resource was not considered for detailed evaluation because effects would be irrelevant to the decision to be made. Federal Emergency Management Agency (FEMA) flood insurance hazard maps of the JPMP site were examined to determine if any floodplains exist at the proposed site. The maps indicate that none of the locations occur within a designated floodplain (FEMA 2005). Various operations will occur in a local wash, but should not result in increased flooding impacts downstream when BMPs are implemented. Therefore, no further investigation is required.

### **3.1.8 Hazardous Materials**

Detailed evaluation of hazardous or solid wastes associated with the proposed project was considered unnecessary because effects would be irrelevant to the decision to be made. No chemicals will be used in the mining or extraction process and no fluids will be stored or impounded during operations. There are no tailings ponds, process ponds, heap facilities or other non-tailing impoundments proposed for the JPMP. KTM&M would follow BMPs to limit the possibility of oil and gas spills from construction vehicles. If a spill does occur removal of any hazardous materials would be conducted in accordance with all federal, state, and county regulations concerning the handling and disposal of hazardous materials. Any hazardous materials removed would be delivered to an approved disposal facility. Therefore, no further investigation would be warranted.

### **3.1.9 Native American Religious Concerns**

This resource was eliminated from detailed evaluation because effects would be irrelevant to the decision to be made since no areas sensitive to Native American Religious Concerns occur within or near the proposed project area. Therefore, no further investigation would be necessary.

### **3.1.10 Noise**

Due to the distance of the proposed project from any population centers, construction will have no affect on the ambient noise experienced at local residences. The closest sensitive receptor to the site is the Town of Nelson, located 1.5 miles northwest. Thus, noise effects were not analyzed in further detail.

### **3.1.11 Noxious Weeds/Invasive Species**

Detailed evaluation of noxious weeds/invasive species was not considered necessary because KTM&M are required to submit a noxious weed management plan as part of the new Plan and Reclamation Plan. Surface disturbance is a major contributing factor to weed propagation. Transport of soils containing existing weeds and seed bank presents a high risk of infestation to new areas. KTM&M will plan and budget for the project site to remain weed free in all working areas to prevent infestation of new and expansion of existing weed, including application of BMPs regarding the control of spreading noxious weeds, such as power washing vehicles that travel to and from the site. Therefore, no further investigation would be necessary.

### **3.1.12 Public Health and Safety**

KTM&M protects workers by compliance with Occupational Safety and Health Administration (OSHA) protection standards. Also, KTM&M protects the public by complying with the most stringent OSHA, city, county, or federal regulations applicable to the particular project. These include the use of flag persons to direct traffic if necessary on project access road, and securing the project site with appropriate fencing, signage and security guards. Thus, no further investigation would be necessary.

### **3.1.13 Recreation**

This resource was not considered for detailed evaluation because effects would be irrelevant to the decision to be made since current casual Off Highway Vehicle use in nearby vicinity will not be altered by the proposed project. Therefore, no further investigation would be necessary.

### **3.1.14 Socio-Economics**

Detailed evaluation of socio-economic values and effects was not considered necessary because effects would be irrelevant to the decision to be made since mining and extraction operations are currently taking place. Therefore, no further investigation would be necessary.

### **3.1.15 Soils**

BMPs have been incorporated as an inherent project element so there would be little appreciable effects upon soils outside the immediate project area. Therefore, this resource is not considered in further detail.

### **3.1.16 Water Quality (Surface/Ground)**

Water quality was not evaluated in detail because effects would be irrelevant to the decision to be made since KTM&M will utilize BMPs to reduce erosion and protect surface and groundwater sources as outlined in the Plan and Reclamation Plan. KTM&M is required by the Nevada Department of Environmental Protection (NDEP) approvals (e.g., SWPP, WPCP) relating to water discharges, runoff and sediment control. No groundwater wells or boring holes will be drilled. No tailings ponds, process ponds, heap facilities or other non-tailing impoundments will be created on site. All water will be trucked in for use on site. Groundwater monitoring will consist of a semiannual sampling of make-up water for Nevada Profile I constituents. Because the amount of land disturbance is so small there would be no effects to groundwater recharge. Therefore, no unavoidable adverse impacts to water quality are expected to occur as a result of construction and operation of the Proposed Action.

### **3.1.17 Wetlands/Riparian Areas**

Detailed evaluation of wetlands and riparian areas was considered unnecessary because effects would be irrelevant to the decision to be made. No wetlands/riparian areas occur within or near the proposed project area. Therefore, no further investigation would be required.

### **3.1.18 Wilderness/Wilderness Study Areas**

This resource was not evaluated in detail because effects would be irrelevant to the decision to be made since no Wilderness occurs within or near the proposed project area. The Proposed Action is located within an area that was inventoried for wilderness characteristics per Sec 603 of FLPMA. The single Wilderness Inventory Unit (WIU # NV-050-04R-18/Eldorado), totaling 94,895 acres, was recommended and dropped from further wilderness consideration as published in the "Initial Inventory Decisions—Public Lands Administered by BLM Nevada—Wilderness (BLM Sept. 1979). Therefore, no further investigation would be required.

## **3.2 Resources Considered in Detail**

This section describes the affected environment, also known as the existing setting, for the resources that were evaluated: biological and visual resources.

### **3.2.1 Biological Resources**

The initial step in the analysis of impacts to biological resources is to identify the vegetative community type in the project area and compile a list of special status plant and animal species anticipated, or potentially located, in the project area. In addition, known distributions of noxious weeds must be identified. This information is used to develop an appropriate field reconnaissance of the facility site by biologists familiar with the local ecological resources. The results of the field reconnaissance are then used to validate and add to the existing information on potentially affected biological resources, as well as to refine the assessment of potential impacts associated with the proposed facility.

#### **Vegetation**

Mojave creosote bush scrub is the predominant vegetation community throughout the project area. This vegetation community is widespread in the Mojave Desert and occurs below about 5,000 feet in elevation. Vegetation typical of the creosote bush scrub community and common within the survey area include: creosote bush, white bursage, broom snakeweed, desert trumpet,

and desert globemallow, and prince's plume (*Stanleya pinnata*). The Biological Assessment prepared for this project contains a detailed list of plants species identified within the project area.

The proposed project is adjacent to known occurrences of rosy two toned beardtongue (*Penstemon bicolor* ssp *roseus*) and yellow two toned penstemon (*Penstemon bicolor* ssp *bicolor*). BLM has determined that if either species occurred within the APE the potential impacts to the species would be negligible due to the small amount of disturbance. (Three individual *Penstemon* spp plants were identified immediately adjacent to the fence of the processing area and are not likely to be disturbed). No other federally-protected plant species were identified as occurring within the project area and none were observed during the field investigations.

### Wildlife

The proposed project area supports wildlife characteristic of this region of the Mojave Desert. The survey followed the 2010 US Fish and Wildlife Service (USFWS) desert tortoise survey (*Gopherus agassizii*) protocol by evaluating parallel transects spaced at approximately 10 meter intervals and supplemental zone of influence pedestrian transects. Common wildlife species included:

#### Reptiles

Two reptile species were observed during an April 2010 field survey conducted by NewFields. These species include the western whip-tail lizard (*Aspidoscelis tigris*) and side-blotched lizard (*Uta stansburiana*).

#### Birds

Bird species observed during the surveys include the California Quail (*Callipepla californica*), Turkey Vulture (*Cathartes aura*), and Common Raven (*Corvus corax*). No tall structures or trees occur for roosting of raptors (predatory birds) however suitable habitat for ground nesting species is present.

#### Mammals

Mammal species observed directly, or indirectly from sign such as burrows, tracks, and droppings, include coyote (*Canis latrans*) and abundant evidence of the presence of common Mojave Desert rodent inhabitants such as desert woodrat (*Neotoma lepida*), cactus mice (*Peromyscus* spp.), and Merriam kangaroo rat (*Dipodomys merriami*).

### BLM Sensitive Wildlife Species

According to the definition of a BLM sensitive species, the following sensitive species are known to potentially occur within the parcel: big horn sheep, western burrowing owl, chuckwalla and banded Gila monster.

#### *Western chuckwalla (Sauromalus obesus)*

The western chuckwalla is a BLM sensitive species that is found throughout the deserts of the southwestern United States and northern Mexico. Chuckwallas inhabit rocky outcrops where cover is available between boulders or in rock crevices, typically on slopes and open flats below

5,000 feet. Typical habitat includes rocky hillsides and talus slopes, boulder piles, lava bed, or other clusters of rock, usually in association Mojave Desert Shrub vegetation. This species requires shady, well-drained soils for nests. The chuckwalla is a widespread species, but is regionally limited by its requirement for rock outcrops. Chuckwallas likely occur within the project vicinity, localized on rock outcroppings.

#### *Banded Gila monster (Heloderma suspectum)*

The Gila monster is a large, heavy-bodied lizard with a massive head, a short thick tail, and short limbs with strong claws. It has flamboyant dorsal coloration of black and pink, orange, or yellow and occasionally exceeds 50 centimeters (19.7 inches) in total length. The Gila monster's range includes extreme southwestern Utah, southern Nevada, and adjacent southeastern California south through southern Arizona, southwestern New Mexico, and much of Sonora to Sinaloa, Mexico. Its habitat includes Mojave and Sonoran desert scrub, desert grassland, thorn scrub, and occasionally pine-oak woodland. Threats to this reptile include illegal collection, traffic fatalities, and most severe is habitat destruction from urban and agricultural development.

#### *Desert bighorn (Ovis canadensis)*

The desert bighorn sheep is a species of management concern that is found mainly along desert mountain ranges in Nevada and California to west Texas and south into Mexico. Bighorn sheep are gregarious, sometimes forming herds of over 100 individuals, but small groups of 8-10 are more common. Mature males usually stay apart from females and young for most of the year in separate bachelor herds. They usually migrate seasonally, using larger upland areas in the summer and concentrating in sheltered valleys during the winter. The proposed area traverses both crucial and winter Desert Bighorn sheep ranges.

### Threatened and Endangered Species

Threatened and endangered species are placed on a federal list by the USFWS and receive protection under the Endangered Species Act of 1973, as amended. The only T&E species known to occur in the vicinity of the project area is the threatened desert tortoise (*Gopherus agassizii*). In the Mojave region, the desert tortoise occurs primarily on flats and bajadas with soils ranging from sand to sandy-gravel characterized by scattered shrubs and abundant inter-shrub space for herbaceous plant growth. They are also found on rocky terrain and slopes. BLM reports that historical survey data indicates that the area surrounding the project site is low density tortoise habitat within desert tortoise critical habitat.

### Migratory Birds

Under the Migratory Bird Treaty Act of 1918 (MBTA) and subsequent amendments (16 U.S.C. 703-711), it is unlawful to take, kill, or possess migratory birds. A list of the protected bird species can be found in 50 C.F.R. §10.13. The list of birds protected under this regulation is extensive and the project site has potential to support many of these species, including the BLM sensitive species the western burrowing owl (*Athene cunicularia*). Typically, the breeding season is when these species are most sensitive to disturbance, which generally occurs from March 15 through July 30.

## 4.0 ENVIRONMENTAL CONSEQUENCES & MITIGATION MEASURES

### 4.1 Biological Resources

#### 4.1.1 Proposed Action

No noxious weeds were currently noted on-site, however adverse impacts to natural vegetation communities may be reduced by implementation of noxious weed monitoring, control, and eradication efforts. Standard BMPs will be followed throughout the proposed mining and extraction process in order to minimize any potential impacts from non-native plant species.

Native vegetation disturbances and subsequent revegetation would be addressed, per the proposed Plan and Reclamation Plan, with the appropriate temporal (early spring or late fall) application of indigenous seeds and plants cultivated on-site in the 40+ year old JPMP nursery facility, recontouring and/or avoidance of existing growth medium.

Bighorn sheep are unlikely to be adversely affected because of the small size of the proposed project and the absence of sign of sheep use and any unique or differentiating habitat characteristics.

The proposed project is located in an area of potential desert tortoise habitat; however, no tortoise signs were observed during the field reconnaissance. If the project is developed as proposed, it is unlikely that any desert tortoise populations would be directly or indirectly impacted.

Migratory birds, including the BLM sensitive species the western burrowing owl (*Athene cunicularia*), may be present on the project site. The direct impacts of the proposed action on western burrowing owl would be loss of nesting habitat and forage, mortality and harassment of individual animals, and decrease in habitat value of adjacent remaining "wildland" areas due to increased human activity in the area. The project proponent will be required to adhere to the following mitigation measures:

To prevent undue harm, habitat-altering projects or portions of projects should be scheduled outside bird breeding season. In upland desert habitats and ephemeral washes containing upland species, the season generally occurs between March 15th and July 30th. If a project that may alter any breeding habitat has to occur during the breeding season, then a qualified biologist must survey the area for nests prior to commencement of construction activities. This shall include burrowing and ground nesting species in addition to those nesting in vegetation. If any active nests (containing eggs or young) are found, an appropriately-sized buffer area must be avoided until the young birds fledge.

#### 4.1.2 No Action Alternative

As the proposed project is not initiated there would be no change in existing vegetation and/or use patterns of the wildlife species typically present in this environment including BLM sensitive species, federally listed threatened or endangered species, and migratory birds.

Currently, only one primary user group – mining operators – are found in the area. Occasional recreational users enjoy neighboring historic and contemporary roads for off highway vehicle riding, hiking and horseback riding. It is a reasonable assumption that these user groups perceive this area as having high scenic and recreation value, including the experience of historic and contemporary mining activities.

The foreground-midground views are of bajada, arroyos, sparse scrubby creosote community vegetation, existing mining and recreational use roads and paths, and the relatively low profile mining processing facilities. Background views combine natural desert consisting of moderately steep terraced and eroded cliffs and crags of muted brown, tan, orange, gray and gold sandstones, granites and limestones.

### *Western burrowing owl (Athene cuniculari hypugaea)*

The Western burrowing owl is a diurnal bird of prey specialized for grassland and shrub-steppe habitats in western North America. The owls are widely distributed throughout the Americas and can be found from central Alberta, Canada to Tierra del Fuego in South America. Burrowing owl habitat typically consists of open, dry, treeless areas on plains, prairies, and desert floors. Burrowing owls most frequently use mammal burrows created by other animals such as prairie dogs (*Cynomys* spp.), ground squirrels (*Spermophilus* spp.), coyotes (*Canis latrans*) or desert tortoises (*Gopherus agassizii*). The burrows are used for nesting, roosting, cover, and caching prey. In recent decades, the range and species count have been declining primarily due to agricultural, industrial, and urban development that reduce burrow availability.

### **3.2.2 Visual Resources**

Visual resources include the natural and man-made features that give a particular environment its aesthetic qualities. Together, they form the overall impression of an area, referred to as its visual character. Visual character is evaluated to assess whether a proposed project would appear compatible with the existing setting or would contrast noticeably with the setting and appear out of place (BLM 1986a). Factors typically considered in selecting Key Observation Points (KOPs) are: angle of observation, number of viewers, length of time the project is in view, relative project size, season of use, and light conditions (BLM 1986b).

BLM has well-developed methods that work well to characterize the visual quality of the area. The BLM has classified lands in its jurisdiction into four classes based on relative value of the visual resources. Class I and Class II are the most valued, Class III represents a moderate value, and Class IV is of least value (BLM 1986a, 1986b). Class I includes areas such as wilderness where a management decision is made to maintain a natural landscape, whereas the other classes are based on the combination of scenic quality, sensitivity level, and distance zones. Scenic quality is a measure of the visual appeal of a tract of land based on landform, water, color, adjacent scenery, scarcity, and cultural modifications. Sensitivity levels are a measure of public concern for scenic quality evaluated in terms of types of users, amount of use, public interest, adjacent land uses, special areas, and others factors. Distance zones divide the landscape into three zones based on relative visibility from travel routes or observation points.

The proposed action is located within VRM Class II in which the objective is to retain the existing character of the landscape and level of change should be low. The BLM requires completion of Contrast Rating Worksheets for all activities located with the VRM Class II in order to determine the visual contrast created between the proposed activity and the existing landscape. KOPs were used to prepare visual simulations, and complete Contrast Rating Worksheets (Appendix A).

The scenic quality of the proposed project area combines predominately natural elements with minimal man-made features. The surrounding landscape consists of muted brown, tan, orange, gray and gold soils and rock, flat to sloping, eroded desert terrain, including traditional Mojave Desert bajada and arroyo elements, and sparse, coarse gray/green low-lying vegetation. Historic and contemporary dirt roads and existing low profile mining and extraction facilities have altered the natural environment within the proposed project area.

## **5.0 Cumulative Impacts**

This section discusses the cumulative effects associated with implementation of the proposed and alternative actions, combined with the effects that other past, present, and reasonably foreseeable future projects may have on the environment. This discussion is not intended to provide a detailed analysis of impacts, as was provided in Section 4.0 of this document. Instead, it must: (1) either list the other proposed or anticipated projects that may contribute to cumulative impacts or provide a summary of projections contained in adopted general plans; (2) summarize the expected environmental impacts of these projects, and; (3) provide a reasonable analysis of the cumulative impacts of the relevant projects.

### **5.1 Proposed Action**

The setting for the JPMP includes the existing mining and extraction facilities site, and the Access and Jackpot Roads. Given that the price of economic minerals, particularly gold and silver, have increased significantly in recent years, it is foreseeable that prospecting and possibly new mining and/or extraction facilities may be proposed in the southern Clark County/Nelson mining district. The surrounding area is comprised largely government administered land, is relatively rural in community character, and is enjoyed by outdoor recreation enthusiasts (hikers, off-roaders, bikers, etc.), which is not likely to change despite potential interest in new mining/extraction ventures.

Analysis indicates that mining and extraction activities associated with the proposed action would not contribute to or would have a negligible contribution to cumulative impacts on biological and visual resources.

### **5.2 No Action Alternative**

If the proposed action were not initiated, the beneficial direct effects on the socioeconomics of the project proponent and mine employees, and indirect impacts to Clark County/Nelson mining district communities in which mine employees reside, would not occur. These include increased revenue and subsequent indirect effects on owner and employee economic contributions to the local and state marketplace.

## **4.2 Visual Resources**

### **4.2.1 Proposed Action**

Impacts to visual resources were assessed utilizing the classification scheme described in Section 3.2.1. The proposed action is located within VRM Class II in which the objective is to retain the existing character of the landscape and level of change should be low. The KOP was used to prepare visual simulations and complete a Contrast Rating Worksheet. The visual contrast between the proposed activity and the existing landscape would be low as the proposed activities are visually coherent with current conditions. The experience of scenic quality for the recreational user would be consistent with past and current visual aesthetics. Vegetation disturbances and subsequent revegetation would be addressed, per the proposed Plan and Reclamation Plan, with the appropriate temporal (early spring or late fall) application of indigenous seeds and plants cultivated on-site in the 40+ year old JPMP nursery facility, recontouring and/or avoidance of existing growth medium.

### **4.2.2 No Action**

As the proposed project is not initiated there would be no change in the existing scenic quality and visual character.

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**ACRONYMS AND ABBREVIATIONS**

APE	Area of Potential Effect
BLM	Bureau of Land Management
BMPs	Best Management Practices
CEQ	Council on Environmental Quality
CCDAQM	Clark County Department of Air Quality Management
CFR	Code of Federal Regulations
EA	Environmental Assessment
FEMA	Federal Emergency Management Agency
GHG	Greenhouse Gas
JPMP	Jackpot/Patsy Mine Project
KOP	Key Observation Point
KTM&M	Krause Thacke Mining and Minerals, LLC
MBTA	Migratory Bird Treaty Act
NEPA	National Environmental Policy Act
NDEP	Nevada Department of Environmental Protection
NRS	Nevada Revised Statutes
OSHA	Occupational Safety and Health Administration
RS2477	Revised Statute 2477 (Sec. 701. 43 U.S.C. 1701)
SPCCP	Spill Prevention Control and Countermeasures Plan
SRCE	Standardized Reclamation Cost Estimator
SWPP	Storm water Pollution Prevention Plan
T&E	Threatened and Endangered (species)
U.S.C.	United States Code
USFWS	U.S. Fish and Wildlife Service
VRM	Visual Resource Management
WPCP	Water Pollution Control Program
WRDF	Water Rock Dump Facility

**APPENDIX A**  
**Visual Contrast Rating Worksheet**

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

VISUAL CONTRAST RATING WORKSHEET

Date APRIL 15, 2011

District LAS VEGAS

Resource Area

Activity (program) MINERALS MGMT

SECTION A. PROJECT INFORMATION

1. Project Name <b>JACKPOT/PATEY MINE</b>	4. Location Township <b>25S/26E</b> Range <b>64E</b> Section <b>32+33/5</b>	5. Location Sketch 
2. Key Observation Point <b>ACCESS ROAD/JACKPOT ROAD</b>		
3. VRM Class <b>CLASS II</b>		

SECTION B. CHARACTERISTIC LANDSCAPE DESCRIPTION

	1. LAND/WATER	2. VEGETATION	3. STRUCTURES
FORM	FLAT TO SLOPED TERRAIN WITH EROSIONAL FEATURES	SIMPLE FORMS CREATED BY VEGETATION PATTERNS	GEOMETRIC, ANGLULAR, LINEAR
LINE	HORIZONTAL, DIAGONAL, ANGULAR	SPARSE + UNDULATING	VERTICAL, HORIZONTAL, ANGULAR
COLOR	SUBTLE GOLD/BROWN/ORANGE LOW CONTRAST + MUTED	MUTED BROWN + SAGE GREEN	MUTED BROWN, TAN, GRAY + WHITE
TEXTURE	COARSE	COARSE + PATCHY	SMOOTH TO COARSE

SECTION C. PROPOSED ACTIVITY DESCRIPTION

	1. LAND/WATER	2. VEGETATION	3. STRUCTURES
FORM	FLAT TO SLOPED	UNEVEN FORMS CREATED BY PIT EXCAVATION	GEOMETRIC, ANGLULAR, LINEAR
LINE	HORIZONTAL (PIT/TRENCH) DIAGONAL (PIT/WRDF)	SPARSE + UNDULATING	VERTICAL, HORIZONTAL, ANGULAR
COLOR	SUBTLED + MUTED LOW CONTRAST	MUTED BROWN + SAGE GREEN	MUTED BROWN, TAN, GRAY + WHITE
TEXTURE	COARSE	COARSE + PATCHY	SMOOTH TO COARSE

SECTION D. CONTRAST RATING  SHORT TERM  LONG TERM

1. DEGREE OF CONTRAST	FEATURES												2. Does project design meet visual resource management objectives? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No (Explain on reverse side)	
	LAND/WATER BODY (1)				VEGETATION (2)				STRUCTURES (3)					
	Strong	Moderate	Weak	None	Strong	Moderate	Weak	None	Strong	Moderate	Weak	None		
ELEMENTS	Form													3. Additional mitigating measures recommended <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No (Explain on reverse side)
Line														
Color														
Texture														
												Evaluator's Names <b>KEN MACDONALD</b> <b>KIM HUTSON DE BELLE</b>		
												Date <b>4.15.11</b>		

D.2. VISUAL CONTRAST BETWEEN PROPOSED ACTIVITY AND EXISTING LANDSCAPE WOULD BE LOW AND VISUALLY CONSISTENT WITH PAST AND CURRENT AESTHETICS. CURRENT SCENIC QUALITY AND CASUAL RECREATIONAL USE OF SURROUNDING AREA WOULD NOT BE DIMINISHED.

D.3. THE PROPOSED ACTION IS CONSISTENT WITH PAST AND CURRENT ACTIVITIES. AS OUTLINED IN THE PLAN + RECLAMATION PLAN, DESERT APPROPRIATE VEGETATION WOULD BE REPLANTED WITH APPROPRIATE TEMPORAL TREATMENT OF INDIGENOUS SEEDS AND PLANTS CULTIVATED ON SITE (JUMP NURSERY), AND/OR AVOIDANCE OF EXISTING GROWTH MEDIUM, OR RECONTAMINATION.