U.S. Department of the Interior
Bureau of Land Management

Preliminary Environmental Assessment

HOGUM PLACER MINING PROJECTS

June 9, 2011

PREPARING OFFICE

U.S. Department of the Interior
Bureau of Land Management
Schell Field Office
720 N. Industrial Way
Ely, Nevada 89301
Phone: 775–289–1800

Preliminary Environmental Assessment : HOGUM PLACER MINING PROJECTS

Bureau of Land Management
June 9, 2011

Table of Contents

List of Figures

List of Tables

Chapter 1. Introduction

This page intentionally
left blank

1.1. Identifying Information:

1.1.1. Title, EA number, and type of project

HOGUM PLACER MINING PROJECTS

Preliminary Environmental Assessment , DOI-BLM-NV-L200–2011–0004–EA

1.1.2. Location of Proposed Action

Area of Analysis is Approximately 2,500 acres of

HOGUM, NEVADA

Township 14N, Range 67E, Sections 21, 22, 23, 24, 25, 26, and 27.

1.1.3. Name and Location of Preparing Office

Schell Field Office - number LLNVL002000

White Pine County, Nevada

1.1.4. Applicants Name

Kapacke Mining, LLC

9123 Placer Bullion

Las Vegas, NV 89178

Fred R. Salisbury

925 South 1775

East Washington, UT 84780

Dig M Excavation Services, Inc.

HC 64 Box 64540

Ely, NV 89301

JTL Mining

8253 South 3200 West

West Jordan, UT 84088

1.1.5. Background Information

Located in eastern Nevada, in the southwest part of the Historic Osceola Mining District, in the area known locally as Hogum (Figure 2.1), placer gold deposits occur in intermittent channels buried under alluvial fan material below the mouth of Mary Ann Canyon. Historically, the channels were worked by sinking shafts to where the channels were and drifting along their margins. The material would be then raised by a whim, shoveled into sluice boxes, and washed with a small quantity of water that came from man-made ditches.

Today's Hogum prospectors and miners use heavy equipment to remove the overburden to expose the channels and then excavate the pay gravel deposits for processing on placer claims. The recovered gold is low-grade, normally fine and nuggets are seldom found. Frequently, small potholes are encountered in the false bedrock, where gold can be found concentrated along their edges.

Hogum's approximate 2,500 acres is made up of 42 active placer mine claims and 40 lode mining claims. There are numerous abandoned mine features such as; shafts, adits, haul roads, open pits, tailings, waste rock dumps and stockpiles scattered across the Hogum area. During the 1980's, Alta Gold Corp mined these slopes. However, they went bankrupt before reclamation could be completed. The Bureau of Land Management (BLM) has conducted limited reclamation of these abandoned mine workings and has been working with local miners to reclaim additional disturbances. The State of Nevada's Abandoned Mine Lands (AML) Program is also actively closing mine hazards at Hogum.

Currently, there are three authorized plan-level operations, one proposed plan-level operation, and one expired notice-level operation below Mary Ann Canyon, totaling 8.7 acres of authorized surface disturbance. By writing a comprehensive analysis of the mining operations past, present, and future, it is the BLM intention to better manage any potential impacts from minor or small mining activities. This environmental assessment (EA) shall provide analysis for all placer mine claims on the Hogum alluvial fan as a group to better identify any cumulative impacts from mining operations as a whole, as well as, individually.

The EA assists the BLM in project planning and ensuring compliance with the National Environmental Policy Act (NEPA), and in making a determination as to whether any significant impacts could result from the analyzed actions. "Significance" is defined by NEPA and is found in Chapter 40 of the Code of Federal Regulations (CFR) §§1508.27. An EA provides evidence for determining whether to prepare an Environmental Impact Statement (EIS) or a "Finding of No Significant Impact" (FONSI).

1.2. Purpose and Need:

The BLM's purpose in considering approval of the applications to allow mining on the slopes of Hogum, Nevada is to provide legitimate use of the public lands to the proponent. Legitimate uses are those that are authorized under the Federal Lands Management Policy (FLPMA) of 1976 or other Public Land Acts and meet the proponents' objective while preventing undue and unnecessary degradation.

The proponents' objective is to mine gold on public land for personal gain and to assist the BLM in reclaiming abandoned mine features, such as tailings, high walls, and pits.

The justification for the project is the proponents have certain rights under 43 CFR 3809 to mine on their valid mining claims.

The BLM needs to consider approval of the applications to allow mining on the slopes of Hogum, Nevada to respond to its mandate under the FLPMA to manage the public lands for multiple use in a manner which recognizes the Nation's need for gold. In addition, operators may participate in the reclamation efforts of the BLM to achieve overall health of public land by reclaiming some abandoned mine features in the Hogum Mining District.

1.3. Conformance with BLM Land Use Plan(s):

The Proposed Action and No Action Alternative complies with federal, state and local laws, and regulations, and is consistent with federal, state, and local policies, and plans.

The proposal is in conformance with the Ely District Approved Resource Management Plan (August 20, 2008), which states, *"To provide for the responsible development of mineral resources to meet local, regional, and national needs, while providing for the protection of other resources and uses."*

1.4. Relationship to Statutes, Regulations, or other Plans:

This document is tiered to the Ely Proposed Resource Management Plan/Final Environmental Impact Statement (RMP/FEIS) released in November 2007. Should a determination be made that implementation of the proposed or alternative actions would not result in "significant environmental impacts" or "significant environmental impacts beyond those already addressed in the RMP/EIS", a FONSI will be prepared to document that determination, and a Decision Record issued providing the rationale for approving the chosen alternative.

The proposal is consistent with the White Pine County Public Lands Policy Plan (2007), which states (p.23) *"Encourage the careful development and production of White Pine County's mineral resources while recognizing the need to conserve other environmental resources."*

This action is consistent with federal, state and local regulations, policies, and programs to the maximum extent possible. This includes federal policies for the General Mining Act of 1872, Federal Land Policy and Management Act, National Historic Preservation Act, Endangered Species Act, and Clean Water Act, and state plans and policies for the management of mineral and water resources, conservation of sensitive wildlife species and management of game.

All mining operations must adhere to the BLM's Best Management Practices (BMPs) as discussed in the Ely RMP (Appendix B).

1.5. Identification of Issues:

While many issues may arise during scoping, not all of the issues raised warrant analysis. Issues raised through scoping are analyzed if:

- Analysis of the issue is necessary to make a reasoned choice between alternatives.
- The issue is significant (an issue associated with a significant direct, indirect, or cumulative impact, or where analysis is necessary to determine the significance of impacts).

- There is a disagreement about the best way to use a resource, or resolve an unwanted resource condition, or potentially significant effects of a proposal or alternative.

An interdisciplinary (ID) team analyzed the potential consequences of the proposal during internal scoping held on November 1, 2010. The following issues were analyzed within this EA as a result of scoping:

- Air Quality
- Soils
- Vegetation
- Rangeland Health
- Wildlife
- Cultural Resources
- Mineral Resources

A project notice was sent to the Nevada State Clearinghouse on February 28, 2011. Several comments were received and have been included as part of the EA.

Chapter 2. Proposed Action and Alternatives

2.1. Introduction:

The previous chapter presented the Purpose and Need for the proposed project along with the identified relevant issues. In order to meet the purpose and need of the proposal in a way that resolves the issues, the BLM should developed a range of action alternatives. However, only a proposed action alternative and no action alternative seem feasible and are presented below. No other alternatives to the proposal were apparent which would meet the purpose and need of the proposal. The potential environmental impacts or consequences resulting from the implementation of each alternative are then analyzed in Chapter 4 for each of the identified issues.

2.2. Alternative A (Proposed Action):

2.2.1. Overview

A typical small mining operation in Hogum consists of ground disturbing activities of 10 acres or less associated with open pit mining. The BLM authorizes operators to use heavy equipment, such as front-end loaders, backhoes, track excavators, bulldozers, and dump trucks to remove the overburden alluvial material to expose the gold bearing channels throughout Mary Ann Canyon's alluvial fan. In some areas, up to 70 feet of overburden may overlay the placer gold deposits. The overburden is stockpiled near the excavation until the channel alluvium is mined out. The waste rock is hauled back to the excavated pit to be used as backfill, along with the stockpiled overburden. Once the earthwork is completed, the operator will seed the disturbed area with an approved seed-mix between October and March. The BLM will inspect and monitor the earthwork and revegetation process to ensure it is successful. Most operators request permission to occupy public lands while working their claims, due to Hogum's remoteness. Trailers, campers, and other personal equipment located on site must be incidental to mining and approved by the BLM field manager.

2.2.2. Surface Disturbances

Currently, the Hogum slope has approximately 170 acres of prior mining surface disturbance measured from aerial photographs (Table 2.1 below). There are approximately 25 miles of existing roads on the Hogum slope created over the past 125 years by wagons and mining equipment. Today's operators are only responsible for bonding and reclaiming new access roads and mine sites. However, operators are encouraged to work with the BLM in partnership to reclaim old useless roads and abandoned mine features on their claims.

Table 2.1. Summary of Hogum's Placer Mining Activities

Operator	Prior Disturbance	Reclaimed Distur-bance	Authorized Disturbance	Access Roads	Proposed Disturbance
Current:					
Fred Salisbury	5 acres	2.5 acres	4.2 acres	0 miles	25 acres
Dig M Excavation	7.8 acres	5.5 acres	4.0 acres	0 miles	12 acres
TJL Mining	4.5 acres	5.5 acres	0.5 acres	0 miles	5 acres
Kapacke Mining	3 acres	1 acre	0 acres	0 miles	100 acres
Totals:	**20.3 acres**	**14.5 acres**	**8.7 acres**	**0 miles**	**142 acres**
Past:					

John Urses	2.17 acres	2.17 acres	0 acres	0 miles	0 acres
Mother Lode, Inc.	Unknown	Unknown	Unknown	Unknown	0 acres
Alta Gold*	15 acres	Unknown	15 acres	Unknown	0 acres
Golden Eagle Mining*	>15 acres	2 acres	13 acres	Unknown	0 acres
Terra Mining*	Unknown	Unknown	Unknown	Unknown	0 acres
Galleria Mining Corp*	15 acres	5 acres	10 acres	Unknown	0 acres
Totals:	**>47.2 acres**	**>9.2 acres**	**> 38 acres**	**unknown**	**0 acres**
Pre- 1970:	~101.5 acres	Unknown	Unknown	~25 miles	
Grand Totals:	**169 acres**	**~24 acres**	**47 acres**	**25 miles**	**142 acres**

** Prior mining operation now abandoned and unreclaimed*

2.2.3. Current and Proposed Disturbances

The current mining operators propose to disturb up to 142 acres of previously disturbed land (Table 2.1) in their Plans and Plan Amendments. However, none of the operators are financially capable of bonding for all of the proposed acreages at once. Hogum gold mining is small scale and done in small increments with concurrent reclamation to help control rising reclamation bond costs. The BLM has in the past and will continue to only authorize mining activities in previously disturbed areas without a comprehensive cultural survey of Hogum.

Although there are currently 40 active lode mining claims at Hogum, this EA will only analyze the 42 active placer mining claims. This is due to differences in lode mining techniques that may require blasting hard rock or other mining practices not used in generic placer mining discussed in this EA.

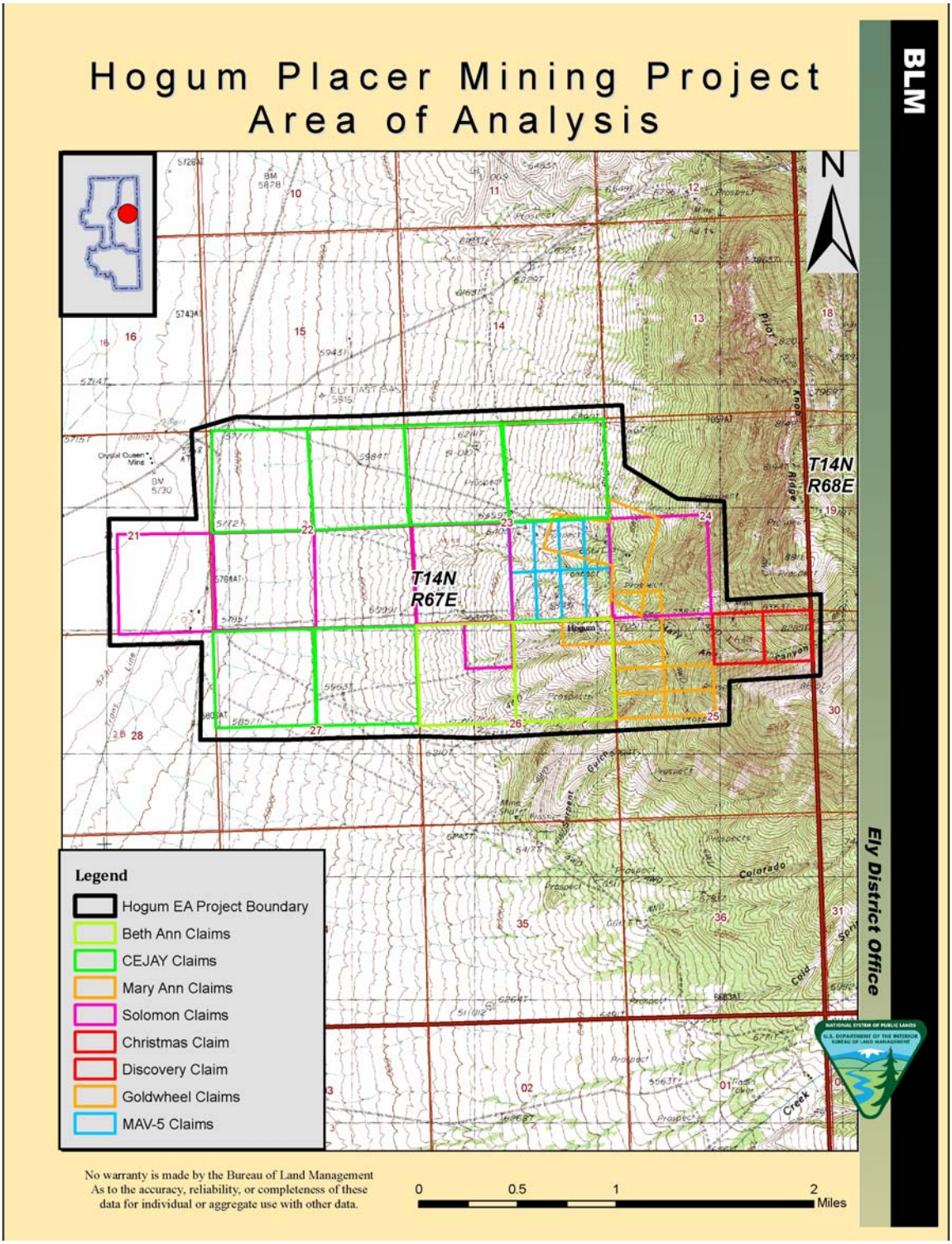

Figure 2.1. Area of Analysis for the Hogum Mining EA

2.2.3.1. Salisbury Mining

Gold Wheel Enterprises, owned by Fred Salisbury, acquired most of their mining claims from Galleria Mining Corp. back in the 1970's and currently owns a total of 22 mining claims

located in T. 14N, R. 67E at Hogum. In cooperation with the BLM, Salisbury has been steadily reclaiming their abandoned operational disturbances, while mining for gold. Salisbury has been mining under an approved Plan of Operation (PoO), since 1986. He is authorized to occupy his claim on a seasonal basis while conducting mining operations. Salisbury submitted a Plan Amendment in May 2011 to mine previously disturbed areas on several of his claims. His Plan was previously analyzed in a 1988 EA.

The Plan Amendment proposes open pit mining on two acres of prior disturbed mine sites within two sets of claims: the Goldwheels and Mary Anns. Salisbury proposes up to 25 acres of disturbance under his Plan Amendment over the next 10 years that could be on historic mine sites or not previously disturbed sites that would require cultural clearance and SHPO consultation.

. Overburden from the Goldwheel #3 would be used to backfill and reclaim an old excavation on his Goldwheel #1 & #3 claims in cooperation with the BLM. A temporary new 500–ft access road would be built and bonded for by Salisbury to transport the overburden to the abandoned Goldwheel pit. The road would be reclaimed once the pit has been reclaimed and seeded to BLM standards. All other mining activities will occur off of existing roads.

Salisbury also plans to re-enter three previously worked pits on the Mary Ann Placer #1, #2, and #3 claims within the near future. Salisbury would be required to inform the BLM of his intent to move from location to location and provide adequate bonding before any commencing ground disturbing activities. A cultural clearance would be require, as well.

Currently, Salisbury is approved and bonded for just over four acres of disturbance. He completed reclaiming 2.5 acres of disturbance in 2010.

2.2.3.2. Dig M Excavation Mining

Dig M Excavation Services, Inc., owned by Michael Pasek, has mined the 20-acre Stormy Claim on previously disturbed land, located in Section 23, T. 14N, R. 67E, since 1997 under an approved mine plan and is amending their current PoO. Approximately eight acres have been mined on this claim so far. Pasek proposes to mine the remainder 12 acres of the Stormy claim, although his mobility to move about is limited by numerous abandoned shafts and potentially historical sites. Avoidance of cultural sites is his only option at this time. Dig M is authorized and bonded for less than four acres of disturbance. Reclamation of 2.5 acres was just completed in 2010 and plans to begin another 2.5 acres in 2011 under his proposed Plan Amendment on previously disturbed land that has been cleared for cultural resources. No new roads are needed.

Dig M is authorized to occupy his claim on a seasonal basis and has a processing plant on the Stormy claim.

Dig M also has two 40–acre claims, the Christmas and Discovery to the east of the project boundary in Mary Ann Canyon. The operator has conducted some exploration on these claims under a Notice that expired in 2007, but has no current plans to mine these claims in the near future.

2.2.3.3. TJL Mining

TJL Mining is a small placer miner at Hogum and has had an approved PoO to mine the MAV-5B and MAV-5C claims located in Section 23, T. 14N, R. 67E, owned by GEM, Inc. since 2008.

An EA was written in 2008 to analyze any potential impacts from their 1–acre limited mining operation. This EA is analyzing up to five acres of surface disturbance proposed by TJL over the next 10 years. TJL Mining is currently limited financially to bonding for less than one acre of disturbance at a time. TJL Mining completed partial reclamation and also reclaimed approximately 1.5 acres of unreclaimed public land in cooperation with the BLM. They submitted an amendment to their plan to mine another 1/4–acre of previously disturbed land approximately 100 feet eastward on MAV-5C and was surveyed for cultural resources in 2008. Their Plan Amendment is currently under review by the BLM.

Their processing plant is setup on private land just west of their mining area. Ore is excavated from the pit and transported downhill by dump truck, where the gold is separated from the gravels and sands. The spoil material is transported back uphill and used for reclamation purposes. TJL occupies private land while mining.

2.2.3.4. Kapacke Mining

Kapacke Mining, LLC submitted a PoO to the BLM Schell Field Office on October 1, 2010 to conduct open pit placer mining on 13 mining claims, totalling 780 acres at Hogum, owned by G.E.M. Inc. Kapacke Mining disturbed three acres of public land under a notice-level operation from 2009 to 2010. They exceeded the limits of a notice-level operation and submitted a PoO in accordance with 43 CFR 3809.11(b) mining regulations. Kapacke proposes to disturb up to 100 acres of previously disturbed public land on the seven MAV-5 claims (A-G) and four Solomon claims (#1, #2, #3, and #7) to mine gold over the next 10 years. However, since Kapacke is unable to post a reclamation bond for all 100 acres at this time, mining will be conducted in 5 to 10–acre increments. A plan amendment, bond review, and a cultural clearance would be required each time a new area is to be mined.

Kapacke plans on continuing the excavation of an existing pit dug in the 1980's and 1990's on the MAV-5G and setup the processing plant on the MAV-5F claim located in Section 23, T. 14N, R. 67E.

Kapacke has requested occupancy on a 1/2–acre of the Solomon #7 claim to setup temporary living quarters for the crew and store equipment in an existing metal shed building. All disturbances would be adequately bonded for reclamation purposes including the metal shed's removal.

2.2.4. Open-Pit Mining

All current and future operators will either continue mining in existing open pits, or begin excavating new trenches within their claim boundaries. New pits require blading off all available topsoil and growth medium and storing it in segregated stockpiles until it is replaced during reclamation. The BLM requires that the operators use an interim seed mixture, if the topsoil stockpiles are to be left for more than one grow season (March — September).

In order to access the ore or gold-bearing channel alluvium, the overburden must be removed with a dozer, excavator, or backhoe. The overburden is stockpiled around the pit perimeter, which also serves as a safety berm. The ore is typically loaded into dump trucks with an excavator or backhoe and hauled to a processing area located on or adjacent to the working claims. These small operations are only mining the "free gold" and not the microscopic or disseminated gold, like in large mining operations, which may require chemical leaching. No chemical heap leaching is used or authorized with these small mining operations in Hogum.

All mining activities are monitored and regulated by Mining Safety and Health Administration (MSHA). The purpose of MSHA is to prevent death, disease, and injury from mining and to promote safe and healthful workplaces for the Nation's miners (MHSA mission statement).

Nevada State Air Quality standards would apply to these operations, and operators would be required to apply water for dust abatement if the problem was above a threshold level as stated in the standards. Following reclamation of the sites and successful revegetation, the local air quality would return to pre-operation conditions.

A Class III cultural inventory is required before any ground disturbing activities can occur. All cultural resources will be avoided. Any alterations to historical mining features or sites will require BLM and the State Historical Preservation Office (SHPO) consultation, and mitigation.

2.2.5. Ore Processing

Normally operators want to process their ore within a close proximity to the pit to be as efficient as possible. Figures 2.2 and 2.3 below show a typical processing plant setup for small mines. Operators may concentrate the gold from the ore by using a combination of several "wash" methods. A wash plant may implement grizzlies, crushers or mills, trommels, sluice boxes, classifiers, centrifuge bowls, dry shakers, shaker tables, or simple prospecting pans. Water and gravity is essential in separating the gold from the gravels and fines.

Dumping the ore on to a grizzly or screen removes oversize rock. The ore then passes through a revolving trommel with flowing water to wash the fines out and drop them down on to sluice boxes or shaker tables. The fines are then concentrated by panning, centrifuge, or other methods.

Figure 2.2. Photo of a typical wash processing plant for gold consisting of a grizzly, trommel, and sluice recovery system (e-goldprospecting.com).

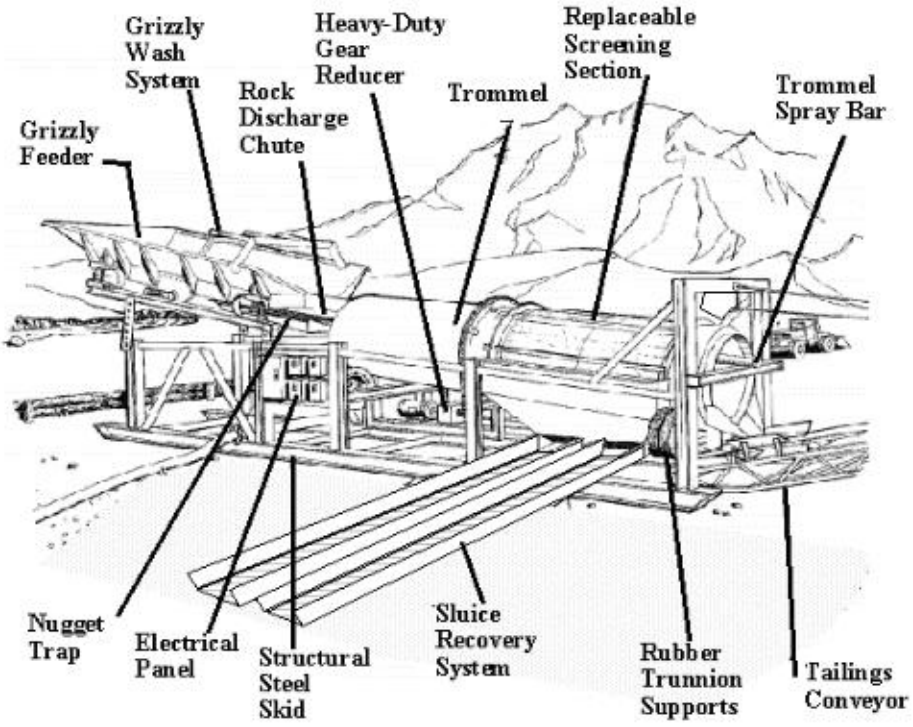

Figure 2.3. Diagram of a typical wash processing plant (e-goldprospecting.com).

2.2.6. Water Usage

Water use for processing the gold may come from existing water wells, drainage ditches, or from upper springs piped down slope. There is an existing buried plastic water pipeline in disrepair, running uphill through sections 22 and 23 of Township 14N, Range 67E. It once supplied water to past mining operations for Alta Gold on the Solomon claims.

There are no surface water sources within the analysis area. Two springs located in and near the eastern portion of the analysis area, White Fire and Violet, have three water rights (two certificated and one vested) for mining and milling water use. White Fire Spring is located on public land above the private land outside the analysis area. Violet Spring is on public land just below the private land and inside the analysis area. One well at the lower end of the analysis area possesses a certificated water right for mining and milling use. No other verified water sources or approved water uses exist in the analysis area.

The two springs are located to the east of the Hogum area and are fully utilized for mining and milling operations. One well at the lower end of the planning area to the west was used for mining and milling. Neither the springs nor the well are approved for domestic or drinking water uses.

The Nevada Department of Environmental Protection (NDEP) requires Plan operators to obtain Water Pollution Control Permits for regulating their operations' wastewater discharge.

2.2.6.1. Salisbury Operation

Fred R. Salisbury has been mining Mary Ann Canyon and its alluvial fan since the late 1970s. Salisbury installed a buried water pipeline that runs from Horse Canyon, Ohio Canyon, and Cold Springs to Hogum in 1986. He controls the water rights and maintains the pipeline.

2.2.6.2. Dig M Excavation Operation

Dig M Excavation captures the excess water draining downhill from Salisbury's operation by diverting it into a lined pond located on the Stormy claim. An exclusion fence surrounds the pond to help keep large animals and humans out. After Dig M uses the water for his operations, he diverts the excess water back into the natural drainage, where it continues downhill on to the next claim.

2.2.6.3. TJL Mining Operation

JTL Mining processes their ore on private land using water from their private water well.

2.2.6.4. Kapacke Mining Operation

Kapacke Mining proposes to revamp the Alta Gold 6,000-ft pipeline and use it to pump water uphill into storage ponds. Water used in their processing would be recycled by returning it to a second holding pond, where it can be reused to minimize water and electricity consumption. However, until the operation can grow in size to warrant the cost associated with repairing the pipeline, Kapacke proposes to use the excess water draining down from the Dig M Excavation operation on to the MAV 5-G claim. Two holding ponds would be built in cut material within a previously disturbed area mined by Alta Gold and possibly prior mining operations.

2.2.7. Power Source

An existing powerline, owned by Mount Wheeler Power (MWP), runs uphill from section 23 to section 26 along the Alta Gold water pipeline. It continues uphill to supply power to Dig M Excavation's and Salisbury's operations. Kapacke Mining would eventually make use of the powerline for their operation, as well. However, during their notice-level exploration phase, they used a diesel-powered generator for their power needs. A generator would be used in the beginning stages of their mine plan, until production reaches the need for a more economical power source.

2.2.8. Waste Rock

The spoils or waste rock are returned to the open pits by dump truck and used as backfill for reclamation. All current operators have adopted a "reclaim as you go" approach to their mining activities to reduce bonding costs and potential impacts. This method reduces the overall area of surface disturbance.

2.2.9. Topsoil Management

All available topsoil or growth medium is salvaged from the pit areas and processing areas and saved for reclamation. The topsoil is stored in berms on the uphill side of the disturbance to help control runoff and trap precipitation. Topsoil stockpiles are seeded with an interim seed mix if left in place for more than one grow season. Once earthwork is complete, the topsoil is spread back over the disturbance and seeded with a recommended final seed mix. The revegetation is monitored by the BLM to ensure it is successful. In the event that revegetation is not successful, a second seeding may be required.

2.2.10. Occupation

Most, if not all Hogum operators have a need to live on site temporarily during mining activities, due to the remote location and to protect their equipment from theft. Ely, Nevada is approximately an hour drive west from Hogum, while Baker, Nevada is maybe a 45 minute drive to the east. Trailers and campers are commonly used and may be left onsite year round. All structures and equipment must be incidental to mining and be approved my the BLM. Annual inspections conducted at a minimum by the BLM ensure compliance to the 43 CFR 3715 regulations. Campsites are to remain clutter-free and adhere to State sanitation regulations.

Currently, Salisbury has two trailers, a warehouse, processing plant, and several storage containers housing equipment and tools on his claims that are all incidental to mining. Dig M has two small campers, a storage container housing equipment and tools, and a processing plant on his claim. Kapacke proposes to house his workers in 2–3 campers and trailers down the hill on public land and occupy an existing metal shed constructed by the previous operator. They will assume the responsibility of the shed and bond for the removal. TJL has two trailers and numerous pieces of equipment on private land down the hill where they process their ore. No TJL equipment is stored on public lands.

2.2.11. Seasonal Work

All current operators work on a seasonal schedule, due to the low winter temperatures and deep snow accumulation. Operators conduct mining activities on the Hogum slope typically between March and November. When operators abandon their operations for winter, all equipment must be secured in a way not to cause undue degradation to public lands or be a risk to wildlife and human health.

2.2.12. Hazardous Materials

These mining operations will not use or store any chemicals onsite at any time without BLM approval. Operators will handle hazardous materials according to state and federal regulations and Standard Operating Procedures (SOP). Any spills of petroleum products will be cleaned up and reported (25 gallons or more) according to Nevada Division of Environmental Protection (NRS 445A) and BMPs. Solid waste will be disposed off site at an approved facility.

2.2.13. Reclamation

Reclamation goals for mining disturbances are 1) stabilize the site, and 2) establish a productive plant community based on the applicable land use plan and designated post-mining land uses.

Each individual mining operation is reviewed and bonded for the costs associated with reclaiming public lands by a third party contractor. The BLM State Office in Reno, NV holds the bond until reclamation is completely satisfactory.

Mining proponents will adhere to the BMPs for Mining in the Ely District in **Appendix B**, in order not to cause any undue or unnecessary degradation to public lands.

2.2.14. Monitoring

The BLM is required to conduct inspections for all active mining operations at least once per year. Inspectors check for surface compliance by the operators to ensure they are following their mining plan to the letter. Any modifications to their plan require the submittal of a Plan Amendment and approval by the BLM Field Manager. The BLM monitors the sites for at least three years after earthwork is complete to ensure adequate revegetation occurs.

It may take several years for the native vegetation to re-establish. The performance goal for successful revegetation is that the reclaimed areas would have 100% of the native perennial canopy cover of the existing adjacent plant cover. The sites are evaluated by the BLM for vegetative progress during each grow season. Any areas that are not successful in revegetation will have a second seeding. If not successful, the BLM reclamation specialist would review the reclamation procedures with the operators to decide on the best course of action. As approved by the agencies, the selected plant communities or reference areas must have a reasonable chance for success on the mine site. Each plan of operation shall identify the site-specific release criteria in the reclamation plan or permit. The determination of successful revegetation of mining disturbances will require an evaluation of the data by the agencies on a site-specific basis (Nevada State Clearinghouse 1998).

The success of the vegetative growth on a reclaimed site may be evaluated for release no sooner than during the second growing season after earthwork, planting and irrigation (if used) has been completed. Final bond release may be considered at that time. Interim progress of reclamation will be monitored as appropriate by the agency and operator. Where it has been determined that revegetation success has not been met, the agencies and the operator will meet to decide on the best course of actions necessary to meet the reclamation goal.

2.2.15. Weeds

Operators are responsible for controlling any noxious or invasive, non-native weed infestations that may become established within their project areas during the life of their projects and final reclamation. This would include the responsibility for control of noxious or invasive, non-native weeds along the access roads. Noxious or invasive, non-native weeds, which may be introduced due to soil disturbance and reclamation, will be treated by methods to be approved by the BLM. Bond release is contingent upon the absence of noxious or invasive, non-native weeds.

The operators are responsible for taking steps to mitigate the spread or increased densities of noxious or invasive, non-native weeds that result from implementation of the proposal. The use of certified "weed-free" seed for reclamation and continuation of noxious or invasive, non-native weed control efforts by the operators, such as vehicle washing and the use of herbicides should reduce the risk of introducing noxious and non-native, invasive weeds to the project area. The operators would implement the Schell Field Office Noxious Weed Prevention Schedule and follow the SOPs for weed treatments, found in the Weed Risk Assessment (**Appendix A**).

2.3. No Action Alternative:

In accordance with BLM NEPA guidelines H-1790-1, Chapter V (BLM 2008), this EA evaluates the No Action Alternative. The objective of the No Action Alternative is to describe the environmental consequences that would result if the proposal were not implemented. The No Action Alternative forms the baseline from which the impacts of all other alternatives can be measured. Under the No Action Alternative, the proposal would not be approved by the BLM and the operator would not be authorized to conduct gold mining operations (i.e., mining, processing, and reclamation). The area would remain available for future gold mining, or processing, or for other purposes, as approved by the BLM. In addition, a No Action Alternative would allow many of the existing disturbances to go unreclaimed and present the BLM with the burden of reclamation.

Chapter 3. Affected Environment

3.1. Introduction:

This chapter describes the existing environment in the project area including physical, biological, social, and economic resources, potential direct and indirect impacts to these resources.

3.2. General Setting:

The mining claims in question are located in the historical Osceola Mining District, perched along the western flank of the Great Basin National Park, at the west-northwest end of the mouth of Mary Ann Canyon, at approximately 6,400 feet above mean sea level on an alluvial fan in an area known as Hogum. This bench receives approximately 9-12 inches of precipitation a year falls on this slope mostly in the form of snow. All current mining operations cease for the winter from late November to March due to the amount of snow and below freezing temperatures.

3.3. Resources/Concerns Analyzed:

The following sections evaluate resources for the potential for significant impacts to occur, either directly or indirectly, due to implementation of the proposal. Potential impacts were evaluated in accordance with criteria listed in section 1.5 of this paper to determine if detailed analysis was required. Consideration of some of these items is to ensure compliance with laws, statutes or Executive Orders that impose certain requirements upon all Federal actions. Other items are relevant to the management of public lands in general, and to the Ely District BLM in particular.

The Mandatory Elements of the Human Environment are listed in Table 3.1 below. Elements that may be affected would be further described in this EA. Rationale for these elements that may or may not be adversely affected is also included in Table 3.1 below.

Table 3.1. Mandatory Elements of the Human Environment

Resource/Concern	Analyzed (Y/N)	Rationale for Dismissal from Detailed Analysis or Issue(s) Requiring Detailed Analysis
Air Quality	Y	This resource is analyzed in this EA.
Cultural Resources	Y	This resource is analyzed in this EA.
Forest Health	N	No forests or woodlands are present in the project area.
Water Resources	N	Water used for mining operations originates from outside the analysis area and use permitted by Nevada State Engineer. No other water resources in analysis area.
Migratory Birds	N	Any new disturbance during the migratory bird nesting season (May 1 – July 15) will need a nest clearance survey one week prior to ground disturbance. A detailed analysis is not required.
Rangeland Health	Y	This resource is analyzed in this EA.
Native American Religious and other Concerns	N	No issues or concerns were expressed from the Confederated Tribes of the Goshute Reservation, Ely Shoshone Tribe and the Duckwater Tribe following consultation.

FWS Listed or proposed for listing Threatened or Endangered Species or critical habitat.	N	Resource is not known to be present in the project area.
Wastes, Hazardous or Solid	N	Appropriate design features are incorporated into the proposal to eliminate impacts.
Water Quality, Drinking/Groundwater	N	Water for mining use permitted by Nevada State Engineer and must comply with State of Nevada laws pertaining to use, disposal, and water quality regulations.
Environmental Justice	N	No minority or low-income groups would be disproportionately affected by health or environmental effects.
Socioeconomics	N	Continued mining of this area will not likely provide any additional revenue for the local economy.
Floodplains	N	This resource is not present in the analysis area.
Farmlands, Prime and Unique	N	This resource is not present in the analysis area.
Wetlands/Riparian Zones	N	This resource is not present in the analysis area.
Invasive non-native or Noxious Species	N	A Weed Risk Assessment is attached (See **Appendix A**). Weeds have been addressed in the proposal. No further analysis is required.
Wilderness/WSA	N	Resource is not present in the analysis area.
Lands with Wilderness Characteristics (LWC)	N	The lands within the project area were eliminated from further wilderness characteristics study.
Heritage Special Designations (Historic Trails, ACEC's designated for Cultural Resources)	N	Resource not present.
Human Health and Safety	N	Resource would not be affected by proposal. Operations would be conducted under MSHA and OSHA regulations with the implementation of a Health and Safety Plan.
Wild and Scenic Rivers	N	Resource is not Present
Special Status Animal Species, other than those listed or proposed by the FWS as Threatened or Endangered.	Y	This resource is analyzed in this EA.
Special Status Plant Species, other than those listed or proposed by the FWS as Threatened or Endangered.	N	None are known to be present within project area.
Fish and Wildlife	Y	This resource is analyzed in this EA.
Wild Horses	N	The project area is not within a Horse Management Area and no wild horses are known to be present within project area.
Soil Resources	Y	This resource is analyzed in this EA.

Grazing Uses/Forage	N	This project area occurs completely within the Major's Allotment. Due to the history of past mining activities and relative size of this project in the overall grazing allotment and necessary rehabilitation, the proposal would have no additional effect on grazing uses and forage resources.
Land Uses	N	Project area is not identified for sale/disposal. All new disturbances would be within the proponent's mining claims. No rights—of-way are required.
Recreation Uses including Back country Byways, Caves, Rockhounding Areas	N	Recreation activities, nor access will be impacted from the proposal.
Paleontological Resources	N	There are no known resources identified in the project area. If any are discovered during implementation of this project, all work in the vicinity will cease and the BLM Archeologist/ Paleontologist will be contacted immediately.
Vegetative Resources	Y	This resource is analyzed in this EA.
Mineral Resources	Y	This resource is analyzed in this EA.
Fire Management	N	No explosives will be allowed to be stored on site.

3.4. Air Quality Affected Environment:

Air quality in the analysis area is unknown due to the lack of monitoring sites in or near the area. The nearest State of Nevada ambient air quality monitoring site is several hundred miles away in Elko County. A general idea of ambient air quality in this part of Spring Valley can be deduced from the parent material that the soils in the project are derived from and the textural class of the surface soils themselves. The soils found in the analysis area indicate that the average soil size class is sand-sized material and as such is not typically susceptible to mobilization by slight disturbance by wind or other action.

3.5. Soils Affected Environment:

The soils in the Hogum analysis area are a by-product of the parent material they are formed from and the weathering agents which have acted upon them for many years. The soils in the steeper portions of the analysis area are typically residuum weathered from igneous, limestone, sandstone, and shale and weathered to form soils with surface horizon textural classes in the very gravelly loam size class. The mid-slope and lower portions of the analysis area soils are made up of alluvium or valley fill material derived from a combination of igneous and limestone parent materials and have textures in the very gravelly loam, very gravelly sandy loam, and very gravelly sandy loam classes. The mid-slope and lower-slope soils formed upon outwash or alluvial fan formations. All soils in the analysis are generally moderately to well drained.

3.6. Vegetation Affected Environment:

The slopes of Hogum are comprised mostly of mountain big sagebrush, rabbitbrush, some forb and grasses, and sparse pinyon/juniper trees. The following noxious weeds are found within the project area; Spotted knapweed (*Centaurea biebersteinii*) and Saltcedar (Tamarix spp). The Saltcedar is found in two isolated locations, but are not spreading at this time. The Spotted knapweed continues to be treated to keep it from spreading. Other invasive, non-native plants found within the project area are Russian thistle (*Salsola tragus*), halogeton (*Halogeton glomeratus*), tumble mustard (*Sisymbrium altissimum*), bur buttercup (*Ranunculus testiculatus*), redstem stork's bill (*Erodium cicutarium)*, and cheatgrass (*Bromus tectorum*).

3.7. Rangeland Health Environment:

The analysis area is completely within the Major's allotment. Due to historic mining and grazing the vegetative structure and composition differs from the Ecological Site Descriptions (ESDs), generally with percent composition by weight showing shrubs are higher than is expected while grasses and forbs are lower when compared to the Potential Native Vegetation (PNV) in the ESD.

3.8. Wildlife Resources Affected Environment:

The project area provides habitat for big game species such as deer and possibly elk, other mammals such as badgers, coyotes and foxes, small mammals such as rabbits and ground squirrels, and reptiles such as lizards and snakes.

3.8.1. Special Status animal species other than those listed as Threatened or Endangered Affected Environment

There is a historic sage grouse lek north of the project area and one active lek south of the project area. The active lek is within two miles of the project boundary. A portion of the project area is heavily disturbed from past mining activities and numerous access roads, however there is some potential sage grouse nesting, brood-rearing, and winter habitat surrounding the previously disturbed area.

3.9. Cultural Resources Affected Environment:

The cultural landscape in Spring Valley has evidence of a long history of human occupation. The earliest commonly accepted date for human presence in the Eastern Great Basin is approximately 10,000 to 11,000 years before present and has been consistently, though not densely populated up to the present day (Aikens and Madsen 1986). Prehistoric resources are located near the project area and may still be in the project area in the few places where the surface is still intact (NVCRIS 2011). Much of the surface within the project area is modified by modern mining activities and by the cultural resources of most concern at Hogum, historic mining sites, as it is part of the Osceola Historic Mining District established in 1872 (White 2010).

"In 1872, prospectors James Matteson and Frank Heck discovered gold three miles west of what is now Great Basin National Park. Over the next six years some 100 claims were staked in the quartz veins of the new Osceola mining district. The production of lodes, however, was not enough to

operate the mines at a profit. In 1877 placer gold was discovered by John Versan. The placers were located between Wet Gulch and Dry Gulch. Three hundred claims were placed and mining began to flourish. By 1882 the town of Osceola grew to a population of more than 1500 people. The community included several stores, a butcher and blacksmith shop, a Chinese restaurant and two stages running regularly to Ward. Uncovered here was almost two million dollars worth of gold, including a nugget weighing 24 pounds which would be worth almost a quarter million dollars at today's prices (http://www.nps.gov/grba/historyculture/the-osceola-ditch.htm)."

3.9.1. Archaeological Resources

The Hogum project area has been periodically mined since the late 1880s as part of the historic Osceola Mining District and likely comprises the majority of archaeological remains in the project area, yet the project area has never been intensively inventoried for archaeological resources, so it is unclear whether prehistoric archaeological resources are present. Within the project area two archaeological sites, 26WP6565 and 26WP1647, have been previously defined as part of the Osceola District. 26WP6565 is the complex of mining features, structures, and artifacts related to the historic Hogum Mine. 26WP1647 is a the southern portion of the Osceola ditch, a hand-entrenched water line to supply the Hogum Mine. Each site has only been partially recorded in conjunction with cultural resource inventories conducted for compliance with Section 106 of the National Historic Preservation Act (NHPA). The latest study was conducted by Statistical Research, Inc. for the White Pine County Abandoned Mine Lands Inventory (White 2010). Within the Hogum project area, 64 abandoned mine features are proposed for closure-all historic features. During that inventory, the field crew also recorded numerous artifacts and structural remains immediately surrounding the adits and shafts proposed for closure and created a new site boundary based on the extent of adit and shaft features totaling about 485 acres. At that time, the Hogum site, 26WP6565, was recommended eligible for the National Register of Historic Places (NRHP) under criterion "a" because of its connection to the Osceola Historic Mining District, a district important to the history of mining in Nevada; however, it was further recommended that studies be conducted in to the history of Hogum to find connections to people important to Nevada history as well as the site's ability to contribute data to research about mining in White Pine County (White 2010), NRHP criteria "c" and "d" respectively. Site 26WP1647 has never been evaluated for the National Register, but is likely eligible under multiple criteria.

3.9.2. Historic Resources

Historic properties may be significant because of attributes other than or in addition to their ability to yield data to the archaeological record. These properties or objects may represent events, people, or design features important in American history. As stated in the previous section, the Hogum mine site is recommended eligible under criterion "a" because of its importance to American history.

Another such resource, the West Osceola Ditch referred to as site 26WP1647, is also present in the project area. The West Osceola Ditch was hand dug ditch to conduct water to mine operations. This unique engineering feature may have been exclusively built by immigrant labor (Henderson 1995).

"In 1884-85 the Osceola Gravel Mining Company constructed a 16 mile ditch, known as the West Ditch, to carry the water from six creeks on the west side of the Snake Range to their placer operations. It did not meet the company's needs, however, and on September

12, 1885 the White Pine News reported that the hydraulic mines were "running very slow at present on account of the scarcity of water, only averaging about 2 hours a day." (http://www.nps.gov/grba/historyculture/the-osceola-ditch.htm).” The lack of water prompted the construction of the East Ditch. This historic engineering feature is currently listed on the National Register. Although the West Ditch has never been assessed for eligibility to the NRHP, it is likely also eligible under multiple criteria.

3.10. Mineral Resources Affected Environment:

Osceola Mining District is a mineral rich area containing Placer Gold, Gold, Silver, Lead, Tungsten, and Phosphate Rock. Joseph Watson and Frank Hicks discovered the Osceola District in August 1872 (Frederick 1998). The slopes of Hogum, Nevada have been mined for gold on and off since the 1880’s. The gold deposits in Hogum are associated with epithermal deposits of quartzite that have been eroded away from the parent vein material. The gold ore is trapped in channels within the alluvium on pediment.

Chapter 4. Environmental Effects

4.1. Introduction:

This chapter describes the effects on the existing environment in the project area including physical, biological, social, and economic resources, resulting from the proposed action and alternative.

4.2. Air Quality Environmental Effects:

4.2.1. Alternative A Proposed Action Effects on Air Quality

Activities expected to affect localized air quality by mobilizing dust-sized materials include the preparation steps prior to open-pit operations (clearing of ground surface, removal of topsoil, removal of overburden), the open-pit operations themselves (removal of alluvium), and the ore processing steps (machine separation and washing). Each of these steps is expected to liberate a certain amount of dust into the air while operations proceed. As operations cease it is expected that a certain amount of fine silt material may linger in the air or be transported by prevailing winds, but for the most part the expectation is for dust to be an ephemeral effect and settle-out in a short time and distance. A possible longer-lived problem with dust are areas of bare ground left exposed and susceptible to moderate or greater wind velocities which could mobilize silt and larger components of the loamy soils and lead to localized dusty air quality days.

Dust suppression measures are integrated into the proposal and are designed to alleviate most of the potential problems listed above.

The proponents are responsible for any State of Nevada limits on point source air quality concerns.

4.2.2. No Action Alternative Effects on Air Quality

There would be no effects to air quality from the No Action Alternative and would remain as it is currently.

4.3. Soil Environmental Effects:

4.3.1. Alternative A Proposed Action Effects on Soils

Loss of soil productivity and the physical alteration of soil horizonation would result from mining activity and reclamation activities. Removal of topsoil, the most nutrient rich soil horizon, stockpiling of said soil, and reuse of soil at some later date tends to shuffle the original order of the soil which may end up reducing the soil's productivity when compared to the undisturbed state. Stockpiled soil may also become integrated into the surrounding landscape and lost over extended times leaving inadequate topsoil for reclamation. Altering the layering of soils may alter the structure, nutrient availability, and ability for plant roots to penetrate the soil.

Soil exposed during the mining activities is more susceptible to wind and water erosion. Soil loss, erosion, would lead to a reduction in soil productivity due to the upper most nutrient laden portions of the soil being most likely to winnow away during high winds or snowmelt or rain

events. Best Management Practices designed and implemented to avoid soil loss and loss of productivity are not 100% effective and some minimal site loss is expected.

Compaction of soils due to excavation and road use is expected and to a degree would be reclaimed as roads are rehabilitated at the cessation of actions. Displacement of soils may occur during road construction or maintenance actions especially if actions occur on existing. Low standard roads. Older, unused roads may be rehabilitated and closed that exist in the project analysis area resulting in a net reduction in road density.

4.3.2. No Action Alternative Effects on Soils

There would be no effects on soils from the No Action Alternative and would remain as it is currently.

4.4. Vegetation Environmental Effects:

4.4.1. Alternative A Proposed Action Effects on Vegetation

Approximately 170 acres of ground disturbance has occurred over the last 100 years at Hogum. It is reasonable to believe that mining will continue and disturb another 75+ acres of public lands. The existing vegetation would be scraped with trackhoes, backhoes, or dozers and used as overlay brush on the reclaimed surface disturbance.

Salvaged topsoil would be seeded with an approved interim seed mix, if left longer than one grow season (March-November). A final seed mix, consisting of native plants and grasses would be used during final reclamation (**Appendix C**). A successful revegetation would restore the native plant community in the area over period of several years.

4.4.2. No Action Alternative Effects on Vegetation

There would be no effects to vegetation under the no action alternative, other than what is currently permitted at Hogum.

4.5. Alternative A Proposed Action Effects on Rangeland Health

The recommended seed mix and successful reclamation of past, present, and future mining features may improve the overall habitat and rangeland health.

4.6. Wildlife Resources Environmental Effects:

4.6.1. Alternative A Proposed Action Effects on Wildlife

During mining operations there could be disturbance to local populations of wildlife as larger animals are likely to be displaced into adjoining habitat where they may be subject to competition with other animals present. There is a low potential for some smaller, less mobile species to be injured or killed during mining operations. Indirectly, long-term effects to wildlife would be minimized through reclamation and rehabilitation of habitat as part of the proposal.

4.6.2. No Action Alternative Effects on Wildlife

Under the No Action Alternative there would be no new effects to wildlife.

4.6.3. Alternative A Proposed Action Effects on Special Status animal species other than those listed as Threatened or Endangered Affected Environment

There will be a loss of some sage grouse habitat as mining operations expand within the project area. Access roads to the project area pass through the outer perimeter of the two-mile active lek buffer to the south. While travel on these roads may disrupt nesting sage grouse, there would be no disruption to breeding birds at the lek itself. These roads will be avoided from March 1 through May 15 when other roads are available to perform mining operations. Additionally, more suitable and unfragmented habitat exists within the surrounding area and birds are more likely to use this habitat versus the disturbed project area. Indirectly, long-term effects to sage grouse would be minimized through reclamation and rehabilitation of habitat as part of the proposal. There would be minimal impacts to sage grouse due to implementation of the proposal.

4.6.4. No Action Alternative Effects on Special Status animal species other than those listed as Threatened or Endangered Affected Environment

Under the no action alternative, there would be no new effects to sage grouse and their habitat.

4.7. Cultural Resources Environmental Effects:

4.7.1. Alternative A Proposed Action Effects on Cultural Resources

All currently proposed and future PoOs shall be subject to the regulations of Section 106 of the NHPA and the BLM Statewide Protocol with the Nevada State Historic Preservation Office. All cultural resources determined eligible for the NRHP shall be completely avoided by the proponent.

No indirect impacts to historic properties are foreseen in relationship to the proposed action. Visual impacts to historic properties will not be noticed by most observers because the actions proposed are small in scale compared to the surrounding landscape and will use methods that will result in disturbances that resemble the disturbance caused by historic mining. Other existing indirect impacts to historic properties erosion may even be improved through reclamation efforts.

If future mining operations in the project area expand into the Hogum historic mining complex that are currently undisturbed by modern mining activity (post-1960), there is a potential to directly impact sites 26WP6565 and 26WP1647. Although historic mine resources have only been partially recorded in the project area, it is known that historic remains are closely surrounded by working and recently abandoned mining operations (Humphrey 2010). Therefore, no new ground disturbance shall be authorized without a complete recordation of the sites in the identified project area and a subsequent assessment of each sites' eligibility to the NRHP. After an

evaluation to the NRHP is made, site elements that contribute to its eligibility shall be identified. The proponent shall then avoid all eligible elements of the site. Therefore, all currently proposed and future placer mining operations should have little or no adverse impacts to historic properties listed on or eligible for the NRHP.

4.7.2. No Action Alternative Effects on Cultural Resources

No further effects to cultural resources would occur under the no action alternative.

4.8. Mineral Resources Environmental Effects:

4.8.1. Alternative A Proposed Action Effects on Mineral Resources

Mining has been conducted for over 125 years in Hogum and most likely will continue for another 100 years. The BLM has seen an increase in mining interest in the Hogum area, due to the current price of gold ($1,500 per ounce).

A fair amount of quartzite is removed from the alluvium and sometimes crushed to extract the gold during the mining process. Quartzite's properties makes it an excellent aggregate and can be sold by the BLM for non-mining purposes. Several abandoned stockpiles of crushed quartzite and limestone may be sold to the adjacent wind farm for concrete aggregate, thus allowing another few acres of public land to be properly reclaimed.

4.8.2. No Action Alternative Effects on Mineral Resources

The No Action Alternative would have no effect on mineral resources in the analysis area.

Chapter 5. Cumulative Impacts

5.1. Introduction:

As required under NEPA and the regulations implementing NEPA, this section analyzes potential cumulative impacts from past, present, and reasonably foreseeable future actions combined with the proposal within the area analyzed. A cumulative impact is defined as "the impact which results from the incremental impact of the action, decision, or project 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" (40 Code of Federal Regulations 1508.7).

The Cumulative Effects Study Area (CESA) for this project is defined by approximately 2,500 acres of the alluvial fan of Mary Ann Canyon known as, Hogum, south of Highway 50 (Figure 2.1).

5.2. Past Present and Reasonably Foreseeable Future Actions (RFFA's):

5.2.1. Past Activities

In the Osceola Mining District, the area known locally as Hogum, has been continuously mined for its placer gold deposits contained in the alluvial fan material below the mouth of Mary Ann Canyon, since the 1880's. At one point during the early 1900's, Hogum had a population of 50 people working the area. In the mid 1980's, Alta Gold began mining the slopes, but went bankrupt. As much as 170 acres of public land may have been disturbed and unreclaimed from past mining activities. The landscape remains scarred from past mining activities with exposed pits, ore dumps, tailing piles, shafts and adits, and numerous two-track roads winding up and down the slope (Table 2.1).

Cattle grazing and hunting may have also occurred in Hogum during the past.

5.2.2. Present Activities

There are 42 active placer claims and 40 lode claims on public land within the area of analysis. There is also an 80–acre patch of patented land within the CESA at the mouth of Mary Ann Canyon. Currently, there are three placer mining operations working the slopes of Mary Ann Canyon authorized to disturb up to nine acres of public land and are amending their plans to disturb another 10 acres collectively over the next one to two years. There are no plans for conducting any lode claim mining at this time.

Recently the Federal Government reclaimed approximately 13 acres of previously disturbed land. Current operators are working with the BLM to reclaim old unreclaimed mining disturbances at no cost to the government. There are no known grazing, hunting, or recreational activities taking place on this slope.

5.2.3. Reasonably Foreseeable Future Actions (RFFA's)

Mining has occurred almost continuously for the past 125 years and it would be reasonable to believe mining will continue for many more generations to come. This EA proposes that up to 142 acres of new mining disturbance may occur over the next 10 years. Kapacke Mining plans to disturb up to 100 acres within the +2,500 acres of analysis area over the next 10 years, if their mine plan is approved.

A comprehensive analysis of cumulative impacts are analyzed in the Ely Proposed Resource Management Plan/Final Environmental Impact Statement (November 2007) on p.4.28-1 to 4.28-88. Typical small mining operations consisting of small pits, waste rock piles, processing facilities, roads, exploration drill pads, and operation facilities are described in the reasonably foreseeable development scenario of that document and are incorporated by reference into this environmental assessment. The reasonably foreseeable development scenarios anticipate 7,500 acres of disturbance and as many as six small mines would be developed, (p. 4.18-8). Since approval of the Ely District RMP in August 2008, no new mines have been developed. However, due to current gold prices in excess of $1,500 an ounce, there are plans for at least two new medium to large size mine in the planning stage within the District. The proposal is far less than 640 acres of surface disturbance, well within the scope of the document.

The BLM and the State of Nevada will continue to close abandoned mine features in Hogum, such as: shafts and adits. Over 60 features in Hogum have been identified for closure.

A 65-turbine wind farm project may be developed on the valley floor less than three miles to the northwest.

Cattle grazing and hunting may continue in the Hogum area.

5.3. Cumulative Effects Conclusion:

5.3.1. Alternative A Proposed Action Cumulative Effects

Cumulative Effects of the Alternative A proposal in combination with the past, present, and RFFA's may involve short-term effects to air quality, soils, vegetation cover, and wildlife, through habitat loss. Successful revegetation as proposed should offset the short-term displacement to wildlife, and non-listed special status species in the long-term. Air quality would return to normal, once the soil is stabilized with vegetative cover.

Mining the slopes of Hogum continue to threaten cultural resources in the area. There are no mitigation measures provided in the proposal to protect the cultural resources other than avoidance. Eventually, operators will run out of previously disturbed areas to mine. A comprehensive cultural survey and inventory would be required to mine areas not previously disturbed or areas that may have historical significance. If a large-scale mining operation would ever occur in Hogum, an EIS with cultural mitigation measures would be required.

The effects on mining gold on the slopes of Hogum to the area's mineral resources is negligible. Nevada is ranked second in the United States for gold production. Gravels produced from crushing ore-bearing quartzites is an excellent source material for aggregate. Current stockpiles of crushed quartzite and limestone abandoned from prior mining activities in Hogum may be sold

as aggregate to an adjacent wind energy project. This would be considered a benefit by reclaiming old abandoned mine features and restoring the health of public lands.

5.3.2. No Action Alternative Cumulative Effects

The No Action Alternative would not allow any more mining to occur on the slopes of Hogum, other than mining activities allowed under casual use (43 CFR 3809.5(1)). Surface disturbances created before 1986 might not be reclaimed for years and continue to pose risk to humans and animals. These lands have been used for mining for over 125 years, therefore other land uses may not be feasible at this time.

Chapter 6. Tribes, Individuals, Organizations, or Agencies Consulted

Table 6.1. List of Persons, Agencies and Organizations Consulted

Name	Purpose & Authorities for Consultation or Coordination	Findings & Conclusions
Duckwater Tribe	Native American Consultation	No comments received on proposal
Ely Shoshone Tribe	Native American Consultation	No comments received on proposal
Goshute Tribe	Native American Consultation	No comments received on proposal

Chapter 7. List of Preparers

Table 7.1. List of Prepares

Name	Title	Responsible for the Following Section(s) of this Document
Dave Davis	Author, Project Lead	Mineral Resources, Proposed Action
Mark D'Aversa	Hydrologist	Soil, Air Quality, Water Resources and Water Quality
Scott Standfill	Range Management Specialist	Invasive Non-Native or Noxious Species, Range, and Vegetative Resources
Ken Humphrey	Archeologist	Cultural Resources
Ben Noyes	Wild Horse Specialist	Wild Horses and Burros
Nancy Williams	Wildlife Biologist	Wildlife, Migratory Birds, and Special Status Species
Dave Jacobson	Wilderness Program Lead	Wilderness, LWC
John Miller	Recreation Planner	Visual Resources and Recreation
Elvis Wall	Native American Coordinator	Native American Religious and other Concerns
Matt Rajala	Fire Management Specialist	Fire Management
Brenda Linnell	Realty Specialist	Lands
Zach Peterson	Forester	Forest Health
Melanie Peterson	Environmental Protection Specialist	Hazardous Material
Gloria Tibbetts	Planning & Environmental Coordinator	Environmental Justice and Socioeconomics
Mary D'Aversa	Schell Field Manager	Approving Official

Chapter 8. References

8.1. Bibliography

Bibliography

43 CFR 3809. 2009, Title 43 Code of Federal Regulations, Part 1000 to End.

Aikens and Madsen 1986. Aikens, Melvin C. and Madsen, David B., 1986 Prehistory of the Western Area. Handbook of North American Indians Vol. 11, Great Basin, Smithsonian Institution, Washington DC.

BLM. 2007. Ely Proposed Resource Management Plan/Final Environmental Impact Statement November 2007. USDI – BLM. Ely District Office.

BLM. 2008. Ely District Record of Decision and Approved Resource Management Plan August 2008. USDI – BLM. Ely District Office.

BLM 2008. Bureau of Land Management National Environmental Policy Act Handbook (BLM NEPA Handbook H-1790-1).

e-goldprospecting.com. Gold screen wash plants, http://www.e-goldprospecting.com/html/gold_screen_wash_plants.html, Website accessed May 3, 2011.

Frederick 1998. Frederick, Donna, September 1998. Brief History of Osceola, http://whitepinecountygenhelp.accessgenealogy.com/Osceola.html, Website accessed May 3, 2011.

Ghosttowns.com. HBC, Ghosttowns.com-the best source of information on ghost towns in the U.S. Ghost towns, http://www.ghosttowns.com/states/nv/hogum.htm. Website accessed May 3, 2011.

Henderson 1995. Henderson, Mark 1995, Personal notes about the South Osceola Ditch located at the Ely District BLM Office, Ely, Nevada.

Humphrey 2010. Humphrey, Kenneth 2010 Personal observation during field visit dated 11/05/2010

MSHA mission statement, http://www.msha.gov/MSHAINFO/MISSION.HTM.

NVCRIS. 2011 Nevada Cultural Resources Inventory System. Website accessed 1/03/2011.

Nevada State Clearinghouse. 1998. Nevada Guidelines for Revegetation. Department of Administration, Budget and Planning Division. Carson City. July 1. http://www.state.nv.us/nvhp/reveg.htm.

White 2010. White, William 2011, Inventory and Evaluation of 218 Hazardous Mine Features Scheduled for Permanent Closure in White Pine County, Nevada. Statistical Research, Inc. Tucson, AZ.