

**UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT
BATTLE MOUNTAIN DISTRICT/MOUNT LEWIS FIELD OFFICE**

DOI-BLM-NV-B010-2015-0062-EA

File Number: NVN-091111

FEB 1 2016

FINDING OF NO SIGNIFICANT IMPACT

I have reviewed Environmental Assessment (EA) DOI-BLM-NV-B010-2015-0062-EA dated January 2015. After consideration of the environmental effects as described in the EA, (and incorporated herein), I have determined that Alternative A with the Project design features identified in the EA will not significantly affect the quality of the human environment, individually or cumulatively with other actions in the general area. No environmental effects meet the definition of significance in context or intensity as described in 40 Code of Federal Regulations (CFR) 1508.27. Therefore, preparation of an Environmental Impact Statement (EIS) is not required per section 102(2) (c) of the National Environmental Policy Act (NEPA).

DOI-BLM-NV-B010-2015-0062-EA has been reviewed through the interdisciplinary team process, and has been sent to the Nevada State Clearinghouse and the public for a 30-day comment period.

After consideration of the environmental effects of the Bureau of Land Management's (BLM) preferred alternative (Alternative A) described in the EA and the supporting baseline documentation, it has been determined that Alternative A identified in the EA is not a major Federal action and will not significantly affect the quality of the human environment.

It has been determined that Alternative A is in conformance with the approved Shoshone-Eureka Resource Management Plan and its amendments, and is consistent with the plans and policies of neighboring local, county, state, tribal, and federal agencies and governments.

The Project will be in conformance with the Shoshone-Eureka Land Use Management Plan and the Approved Greater Sage-Grouse Resource Management Plan Amendment. The disturbance to Greater Sage-Grouse habitat within the Project area shall be coordinated with the BLM and NDOW and would follow current guidance from the BLM Nevada State Office. The mitigation shall be developed by resource agencies and included in the Decision Record.

Context

The BLM has evaluated the Plan of Operations (Plan) titled, *Klondex Gold & Silver Mining Company Fire Creek Mine, Lander County Nevada (NVN-091111/Nevada Reclamation Permit No. 0241 Modification)* and has prepared an Environmental Assessment (EA), DOI-BLM-NV-B010-2015-0062-EA that analyzes the affected environment, environmental impacts, and identifies environmental protection measures associated with the Klondex Project. The final

Plan was submitted January 29, 2016 in accordance with the BLM Surface Management Regulations 43 Code of Federal Regulations (CFR) 3809, as amended. It has been assigned BLM case file number NVN-091111. The proposed Plan will result in a total of 79.86 acres of new surface disturbance.

The Project is an existing advanced underground and surface exploration project with 150 acres of currently authorized surface disturbance within an area that measures approximately 1,988 acres. The authorized facilities to support current operations include the following:

- One portal for underground access;
- Underground workings with ventilation and an emergency escape-way;
- An engineered waste rock repository (WRR);
- Three water management ponds (Stormwater Pond #1, Dewatering Storage Pond, and Fire Water/Emergency Pond);
- Stormwater diversion channel;
- A passive dewatering system for the mine workings to manage up to 100 gallons per minute (gpm), including a water treatment plant at the surface;
- Two rapid infiltration basins (RIBs);
- One groundwater production well (PW-1) and nine monitoring wells (GW-1 – GW-9);
- Power infrastructure;
- Administrative, dry, and operations buildings;
- Maintenance and equipment laydown areas;
- Material screening and batch plant;
- Growth media stockpiles;
- Small vehicle roads; and
- Surface exploration drill pads and drill roads.

Klondex is proposing to transition the authorized exploration plan to a full-scale mining level and establish an ore production rate, which is projected to increase the mine life by approximately four years based on current economics. No ore processing facilities are proposed and the ore would continue to be transported for off-site processing to the existing Midas Mine, owned by Klondex, located in Elko County, Nevada. To support the increased production rate and also to further the definition of the mineral resource, Klondex is proposing to:

- Develop additional underground workings for mining and continued exploration within a defined mining zone;
- Construct and operate a new Waste Rock Storage Facility (WRSF) that would incorporate a Class-III waived landfill;

- Install stormwater diversion channels and water management facilities around the WRSF, including two ponds (Seepage Collection Pond and Stormwater Pond #2);
- Construct and operate a new water management pond (Treated Water Pond);
- Construct additional underground portals, ventilation raises, and service holes;
- Install a lined ore storage pad on the existing WRR and near the additional portals;
- Reconfigure existing and construct new support facilities;
- Install additional monitoring wells and stream gauges;
- Build additional facility access and haul roads;
- Install communication infrastructure; and
- Conduct additional surface exploration activities in phases within the existing and expanded Plan boundary as embodied in the Plan (NVN-091111) dated May 2015.

The Plan boundary would increase by approximately 1,467 acres for a total of approximately 3,455 acres.

The proposed modifications will be located on BLM-administered land in the following location:

Mount Diablo Base and Meridian		
Township	Range	Section(s)
30 North	47 East	9, 10, 14, 15, 16, 22, 23, and 24
30 North	48 East	19

For a complete description of Alternative A, please refer to the EA, Section 2.2, Alternative A – Phase I Operations Only.

Pursuant to NEPA and the Council on Environmental Quality regulations on implementing NEPA, the EA identifies, describes, and evaluates resource protection measures that would mitigate the possible impacts of the preferred alternative. The short- and long-term impacts as disclosed in the EA are not considered to be significant to the human environment. The short-term impacts from implementation of Alternative A are local; they are not regional or national in nature. The long-term impacts resulting from Alternative A would be mitigated by concurrent reclamation during the life of the Project and meeting all reclamation requirements prior to closure of the Project.

Intensity

1. Impacts that may be both beneficial and adverse.

Potential impacts to the environment as identified in Chapter 3 of the EA include the following:

- Air quality: Travel on dirt roads and exploration, construction, and mining activity within the Project area have the potential to create fugitive dust and vehicle emissions.

Fugitive dust would be controlled by minimizing surface disturbance and utilization of other Applicant Committed Protection Measures (ACEPMs) described in Chapter 2 of the EA. The potential impacts would be temporary and would cease upon completion of the Project and successful revegetation of the surface disturbance.

- **Water quality:** Alternative A would have minimal effect on surface water quality. Klondex would implement the environmental protection measures identified in Section 2.1.15 and described in more detail in the Project's Stormwater Pollution Prevention Plan included as Appendix D of the Plan. Additionally, Klondex would continue to monitor surface water locations along Fire Creek and the two spring locations onsite. In addition, no disturbance would occur in the spring and seep areas or any wetland and riparian vegetation.
- **Potential release of hazardous materials:** Hazardous air pollutant (HAP) emissions would result from facility expansion activities but would be well below the EPA threshold of 25 tpy (tons per year) and would have a minimal impact on air quality in the vicinity of the project.
- **Cultural resources:** The Fire Creek Archaeological District (FCAD) is a National Register-eligible district comprising a large portion of the proposed Plan area. In total, 62 sites and loci in the Project area are considered historic properties. Alternative A would only include activities and disturbance associated with Phase I of the Proposed Action. All of the proposed Phase I disturbance is located within areas that have been inventoried or treated for cultural resources. All proposed Phase I disturbance would avoid cultural resources. Therefore, under Alternative A, no impact to cultural resources would result.
- **Social and economic values:** Overall, there would be positive effects on the local economy as the addition of 97 new jobs by Klondex would increase the demand for goods and services in the surrounding communities. There would also be a minor increase in the demand for public services including schools, water, wastewater and medical services.
- **Visual resources:** The level of change to the characteristic landscape can be high. These management activities may dominate the view and be the major focus of viewer attention. However, every attempt would be made to minimize the impacts of these activities through careful location, minimal disturbance, and repeating the basic elements. The effects of Alternative A on visual resources would be consistent with BLM prescribed Class IV Visual Resource Management (VRM) objectives.
- **Recreation:** There are no recreational facilities within the Project area and vicinity, and in this part of Nevada, developed recreational opportunities are relatively sparse. Opportunities for public recreation are considered as dispersed in nature and primarily include off-highway vehicle use, hunting, and camping. Alternative A would not change existing access to public lands within the Project area for recreational uses.

- **Native American cultural resources:** Various locations throughout the BLM Mount Lewis Field Office (MLFO) administrative area host certain traditional, spiritual, and cultural use activities today, as in the past. Traditional Cultural Properties (TCPs), designated by the Tribes, are not known to exist in or within the vicinity of the Project area. The BLM continues to solicit input from local tribal entities. The BLM is continuing to coordinate with the Tribes to identify any other sites or artifacts, or cultural, traditional, and spiritual use resources and activities that might experience an impact.
- **Grazing:** Based on the proposed surface disturbance associated with the Proposed Action on public land approximately 79.86 acres would be temporarily suspended from grazing, which equates to approximately 5 AUMs in the Argenta Grazing Allotment. This represents approximately 0.03 percent of the AUMs within the Argenta Grazing Allotment. All proposed disturbance on public land would be subject to reclamation, and no acres would be permanently removed from grazing.
- **Soils:** Under Alternative A, approximately 79.86 acres of additional soil would be disturbed outside of the authorized disturbance footprint. The majority of the existing and proposed disturbance occurs within the Waltham-Cleavage Softscrabble Association. Reclamation and top soil conservation procedures and practices would be used to minimize erosion; final reclamation activities in the Plan include the stabilization and revegetation of all disturbed areas within the Project area.
- **Vegetation:** The Project is located within the Intermountain Region, Great Basin Division, Central Great Basin Section floristic zone (Cronquist et al., 1972). Approximately 895 acres within the Project area burned in 1996 and approximately 276 acres in the northern portion of the Project area burned again in 2011. Activities in Alternative A would disturb approximately 79.86 acres of vegetation within the Project area. The majority of the new disturbance is located within a Claypan 12-16" P.Z.. Reclamation and revegetation activities are outlined in Section 2.1.12 of the EA. Reclamation and revegetation activities would be in conformance with the BLM and State of Nevada Reclamation regulations. Reclamation and revegetation would minimize the direct impacts to the vegetation communities within the Project area.
- **Potential for spread of noxious weeds and invasive, non-native species within the Project area:** Alternative A would slightly increase the potential for promoting the spread and establishment of noxious weeds and invasive and non-native species. Implementation of Klondex's Weed Management Plan would ensure proposed activities follow proper BLM protocols regarding invasive, non-native weeds.
- **General Wildlife:** A survey of the project area yielded the identification of hawk nests, eagle nests, falcon nests, owl nests, mule deer and pronghorn antelope. Other wildlife native to the Great Basin region was also observed, including reptiles, birds and other mammals. Appropriate wildlife surveys, restrictive buffers, or seasonal use restrictions would be observed to minimize wildlife impacts. The Project design features and environmental protection measures would minimize impacts to general wildlife species.

A total of approximately 79.86 acres would be disturbed accounting for approximately two percent of the total Project area.

- **Special status species:** Currently there are two leks within four miles of the Project boundary that are of Unknown Status (Horse Heaven). A physical disturbance buffer of 3.1 miles from the two Unknown leks will be followed during the life of the mine. In order to adhere to the ARMPA disturbance buffer of 3.1 miles (Appendix B, BLM 2015), prior to any surface disturbance, a qualified biologist will determine the proposed area for disturbance and calculate the distance to the lek and notify the BLM and NDOW. If the disturbance falls within 3.1 miles of either of the two leks, BLM, NDOW, and Klondex will coordinate and discuss options on how to proceed. Alternative A would incorporate Project design features and environmental protection measures for migratory birds and sensitive species that would minimize direct impacts to sensitive bird species. Nine sensitive bat species have been confirmed or have the potential to occur within the Project area. The proposed activities and disturbance in Alternative A would not result in the disturbance or removal of bat hibernacula or roosting sites.
- **Migratory birds:** The Project design features and environmental protection measures would minimize direct impacts to migratory birds. A total of approximately 79.86 acres of potential migratory bird nesting and foraging habitat would be disturbed. No vent raises are proposed in Alternative A.

Many of these impacts would be minimized by the ACEPMs outlined in the 2015 exploration Plan as well as by the concurrent reclamation and other measures required in the mining Plan.

Klondex would continue to commit to the practices described in the approved 2015 Plan of Operations to prevent undue or unnecessary degradation during the life of the Project. No changes to these committed practices are proposed in this mining Plan.

Impacts that would be avoided or minimized by operation and reclamation measures committed to by Klondex are presented in Chapter 2. None of the environmental impacts disclosed above and discussed in detail in Chapter 3 of the EA are considered significant.

Reclamation would be completed using the following policies, rules, standards, and best practices:

- The performance standards described in 43 CFR 3809.420;
- Nevada Administrative Code (NAC) 519A;
- United States Department of the Interior Solid Minerals Reclamation Handbook #H-3042-1;
- Surface Management of Mining Operations Handbook H-3809-1;

- Revegetation success standards per BLM/Nevada Division of Environmental Protection (NDEP) “Revised Guidelines for Successful Mining and Exploration Revegetation.”

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

The effects of Alternative A on both public health and safety would not have significant adverse impacts as Klondex would be required to follow U.S. Department of Labor Mine Safety and Health Administration regulations along with maintaining all equipment and facilities in a safe and orderly manner.

Through adherence to ACEPMs, and Best Management Practices (BMPs), Alternative A would not result in potentially substantial or adverse impacts to public health and safety. Public safety would be maintained throughout the life of the Project. Klondex would commit to the following ACEPMs to insure public health and safety:

- All equipment and other facilities would be maintained in a safe and orderly manner.
- Personnel working at the site would keep the occasional public out of operational areas.
- All sumps and other small excavations that pose a hazard or nuisance to the public, wildlife, or livestock would be adequately fenced to preclude access.
- Only nontoxic fluids would be used in the drilling process.
- All drill holes would be surveyed and plugged as an operations procedure immediately after completion of drilling in accordance with BLM standards.
- Stormwater BMPs would be used to minimize erosion and Klondex would follow the Stormwater Management Plan (Appendix D).
- Klondex would follow the Spill Prevention and Control Plan (Appendix E).
- Klondex would not conduct new activities causing surface disturbance within 100 feet of any active drainage, seep, or spring with the exception of installing stream flow monitoring gauges, which would be used after consultation with the BLM.
- Klondex would hire a certified commercial applicator for the application of pesticides on the Project site. Existing roads within the Project boundary that are disturbed during the Proposed Action would be reclaimed by Klondex to their pre-disturbance condition in order to provide continued public access through the area.
- Unpaved roads are and would continue to be well maintained and accommodate two-lane traffic to and from the Project area.
- Trash and regulated wastes would be contained and hauled to an approved landfill.
- Portable chemical toilets would be used for human waste.
- Drill sites and storage yards would be located off of existing roads.

- Emissions of fugitive dust from disturbed surfaces would be minimized by utilizing appropriate control measures.
- Speed limits would be enforced.
- Areas within the Project area that have not been subject to a Class III inventory would be surveyed by an authorized archaeological contractor prior to any disturbance. The results of the survey would be submitted to the BLM for review and use in planning future phases of disturbance. All cultural resources discovered would be avoided or treated in coordination with the BLM.
- If cultural or paleontological resources are discovered, Klondex will consult with BLM and will comply with all regulations including 43 CFR 10.2, 10.4 and 10.4(g) and will follow all procedures outlined in section 2.1.15.
- Klondex would adhere to the provisions of the Migratory Bird Treaty Act.
- To prevent violation of the Migratory Bird Treaty Act, Klondex will either conduct new surface disturbing activities outside the migratory bird nesting season (March 1 through July 31) or employ a BLM qualified biologist to survey prospective work areas prior to surface disturbance during the nesting season.
- Klondex would not conduct any surface-disturbing activities within a 4-mile radius of any known Active or Pending Active Greater Sage-Grouse lekking grounds from March 1 to May 15 of each year; and would coordinate actions with the BLM and NDOW and follow mitigation measures outlined by resources agencies.
- Klondex will follow the Noxious Weed Management Plan included in the Plan, including obtaining approval from BLM prior to the use of any herbicides.

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

The Project area is located in Lander County, approximately 37 miles east of Battle Mountain and 4 miles northwest of Crescent Valley, Nevada. There are no park lands, prime farmlands, wetlands, or wild and scenic rivers in the vicinity.

There are known cultural resources located within the Project area. No surface-disturbing activities are proposed within areas known to contain cultural resources in Alternative A.

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

Alternative A is not expected to have effects on the quality of the human environment such that they are highly controversial. The parameters of the Project activities, along with associated reclamation are well established. The Project area is isolated from human

habitations. Except for mineral mining, grazing, and recreation uses, the Project area is typically uninhabited.

Reclamation measures should return the land to its pre-mining/exploration uses of livestock grazing, mineral exploration, dispersed recreation, and wildlife habitat.

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

There are no known effects of Alternative A identified in the EA that are considered highly uncertain or involve unique or unknown risks. Project activities similar to what has been included in Alternative A have been conducted numerous times over many years on BLM-administered land and the effects are well understood. This is demonstrated through the effects analysis in Chapter 3 of the EA.

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

Alternative A will not establish a precedent for future actions with significant effects or represent a decision about a future consideration. Completion of the EA does not establish a precedent for other assessments or authorization of other development Projects including additional actions in the Project area. Any future Projects within the area or in surrounding areas will be analyzed on their own merits, independent of the actions currently selected.

7. *Whether the action is related to other actions with individually insignificant but cumulatively significant impacts.*

Direct and indirect impacts of Alternative A were analyzed in Chapter 3 (Affected Environment and Environmental Consequences) of the EA. None of the environmental impacts disclosed under item 1 above and discussed in detail in Chapter 3 of the EA are considered significant. Past, present, and reasonably foreseeable future actions as identified in Chapter 2 of the EA have been considered in the cumulative impacts analysis within Chapter 3 of the EA. The cumulative impacts analysis examined all of the affected resources and all other appropriate actions within the Cumulative Effects Study Areas and determined that Alternative A would not incrementally contribute to any significant impacts. In addition, for any actions that might be proposed in the future, further site-specific environmental analysis, including assessment of cumulative impacts, would be required.

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

The Fire Creek Archaeological District (FCAD) is a National Register-eligible district comprising a large portion of the proposed Plan area. In total, 62 sites and loci in the Project area are considered historic properties. All of the proposed Alternative A activities are located within areas that have been surveyed.

No surface-disturbing activities are proposed within areas known to contain cultural resources in Alternative A.

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

The United States Fish and Wildlife Service, the Nevada Natural Heritage Program (NNHP), and Nevada Department of Wildlife (NDOW) were contacted to obtain a list of threatened, endangered, and sensitive species that have the potential to occur within the Project area. In addition, the BLM Sensitive Species List and Special Status Species lists for the Battle Mountain District were evaluated.

From March 1 through June 30 of each year, Klondex would not conduct any surface disturbing activities within a 4.0-mile radius of any known Active or Pending Active Greater Sage-Grouse leks. Currently there are two leks within four miles of the Project boundary that are of Unknown Status (Horse Heaven). A physical disturbance buffer of 3.1 miles from the two Unknown leks will be followed during the life of the mine. In order to adhere to the ARMPA disturbance buffer of 3.1 miles (Appendix B, BLM 2015), prior to any surface disturbance, a qualified biologist will determine the proposed area for disturbance and calculate the distance to the lek and notify the BLM and NDOW. If the disturbance falls within 3.1 miles of either of the two leks, BLM, NDOW, and Klondex will coordinate and discuss options on how to proceed.

Annual lek surveys would continue to be conducted by a qualified biologist between March 1 through May 15 for the two Horse Heaven leks (currently Unknown Status), both located within four miles of the Project Area for the 4-year mine life of the Project in this Plan. Klondex would continue to do monitoring and surveying and if at any point the leks are deemed Active or Pending Active, then the buffer would be 4.0 miles as per MD SSS 3D.1.a of the Nevada and Northeastern California Greater Sage-Grouse Approved Resource Management Plan Amendment (BLM, 2015) and all seasonal timing restrictions will be observed. Lek surveys will be reported annually to the BLM and NDOW.

The Project has valid existing rights and therefore not subject to MD SSS 3a of the Nevada and Northeastern California Greater Sage-Grouse Approved Resource Management Plan Amendment (BLM, 2015). However, to prevent unnecessary or undue degradation to Greater Sage-Grouse habitat, the BLM and Klondex shall consult with the State of Nevada's Sagebrush Ecosystem Technical Team (SETT) regarding the use of the State of Nevada Conservation Credit System (CCS), or other applicable mitigation system. Currently 50 acres of disturbance to GHMA is proposed in Alternative A. The locations

have not been determined at this time but Klondex will coordinate with BLM and NDOW to minimize impacts when feasible. If the CCS and Habitat Quantification Tool (HQT) can be utilized then debits and an associated credit obligation based on functional acres of GRSG habitat lost would be determined and Klondex shall purchase credits based on the credit obligation determined by the associated HQT within 6 months of credits being available for purchase through the CCS. If the CCS associated HQT cannot be utilized then a mitigation ratio based on functional acres lost will be determined through consultation with the SETT and/or NDOW to offset impacts to GHMA. Utilizing the CCS to purchase credits or determining a mitigation ratio based on functional acres lost will fully offset any potential for net loss of Greater Sage-Grouse habitat resulting from Project activities.

Klondex would implement the following Required Design Features (RDFs) for Locatable Minerals as outlined in Appendix C of the ARMPA (BLM, 2015):

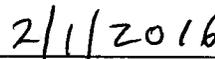
- RDF LOC 1 – Klondex would install noise shields during surface exploration drilling activities when drilling during the breeding, nesting, brood-rearing, and/or wintering season as applicable to the habitat within the Project area.
- RFD LOC 2 – Klondex has designed the facilities in the Proposed Action to utilize existing disturbance when possible and locate new facilities within or adjacent to the existing operations areas to minimize disturbance to habitat areas.
- RDF LOC 5 – Klondex would revise the reclamation seed mix as directed by the BLM to protect and improve Greater Sage-Grouse habitat and meet Table 2.2 of the ARMPA habitat objectives upon final reclamation of the Project as applicable to the habitat types within the Project footprint.
- RDF LOC 6 – Klondex would perform concurrent or interim reclamation whenever feasible as outlined in Section 2.1.12.11.

10. *Whether the action threatens a violation of Federal, State, or local law or requirements imposed for the protection of the environments.*

Alternative A will not violate or threaten to violate any federal, state, or local law or requirement imposed for the protection of the environment.



Jon D. Sherve
Field Manager
Mount Lewis Field Office



Date

