

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

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**Environmental Assessment**

**Noel Wood— Crow Foot Placer Mining Plan of Operations  
WYW168591**

**BLM EA No. WY-050–EA14–97**

**PREPARING OFFICE**

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Prepared by  
**U.S. Department of the Interior**  
**Bureau of Land Management**

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# **Chapter 1. Purpose and Need for Action:**

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## **1.1. Introduction:**

This Environmental Assessment (EA) has been prepared to disclose and analyze the environmental consequences of the Crow Foot Placer Plan of Operations as proposed by Noel Wood. The EA is a site specific analysis of potential impacts that could result with the implementation of a proposed action or alternatives to the proposed action. 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 regulation 40 CFR 1508.27. An EA provides evidence for determining whether to prepare an Environmental Impact Statement (EIS) or a statement of “Finding of No Significant Impacts” (FONSI). If the decision maker determines that this project has “significant” impacts following the analysis in the EA, then an EIS would be prepared for the project. If not, a Decision Record (DR) may be signed for the EA approving the selected alternative, whether the proposed action or another alternative. A DR, including a FONSI statement, documents the reasons why implementation of the selected alternative would not result in “significant” environmental impacts.

## **1.2. Background:**

Noel Wood proposes to excavate several trenches for gold exploration on the Crow Foot placer mining claims approximately 8 miles east of Atlantic City near Strawberry Creek. Up to six, 10ft x 20ft trenches would be excavated in one area (or one season) before moving onto the next trench over approximately 6 years. Trenches would be excavated and reclaimed consecutively and processing would occur within the excavated trenches. Ore would be run through a self-contained wash plant, and tailings would be run back into the trench which would be reclaimed. Then the wash plant would be moved to a newly excavated trench adjacent to the previous, and processing would continue in this manner until the extent of the deposit had been reached. Access to the proposed trenching areas would be along an existing two track. Total disturbance over the six year mine life would be approximately 5 acres. This project is located in the South Pass Area of Critical Environmental Concern (ACEC) in NE Sec. 14 and NW Sec. 13, T. 29 N., R. 99 W., 6th P.M., Fremont County, WY. The proposed project is located entirely on Federal lands. Because the project is within an ACEC and represents mining activities, not exploration, a Plan of Operations was required.

## **1.3. Purpose of the Proposed Action:**

The purpose of the proposed action is to consider approval of a mining Plan of Operations for the extraction of valuable gold deposits located on existing mining claims.

The content standards of 43 CFR 3809.401, and the performance standards as shown in 43 CFR 3809.420 represent the de facto criteria for determining whether or not a proposed plan of operations could result in unnecessary and undue degradation. As long as the operator’s proposed plans of operations meet these minimum standards, BLM has little option but to approve the plan. However, the BLM’s objective in considering the Plan of Operations as proposed is to evaluate whether or not it meets these criteria and prevents unnecessary and undue degradation of public lands.

In addition, because the Plan of Operations included a provision to occupy or use the site for other activities purported to be “reasonably incident” to mining, the proponent must seek concurrence

from BLM before beginning this use and comply with all provisions of this subpart as defined in 43 CFR 3715, Use and Occupancy Under the Mining Laws.

#### **1.4. Need for the Proposed Action:**

BLM's need for this action is reflected in the agency's responsibility to process and approve mining plans of operations that do not violate the "unnecessary and undue degradation" standard of the Federal Land Management Policy Act of 1976 (as amended). This standard was promulgated through the 43 CFR 3809 Surface Management Regulations. The approval is required in order for the mining claimant to exercise his statutory rights to explore for valuable minerals from mining claims located under the provisions of the General Mining Law of 1872 on public lands where the mineral interest is reserved to the United States.

#### **1.5. Conformance to BLM Land Use Plan(s):**

- The proposed action is in conformance with the Lander Record of Decision and Approved Resource Management Plan, June 26, 2014.
- The proposed action is outside of any withdrawn areas or proposed withdrawals as determined in the 2014 RMP.
- The proposed action would not result in an amendment to the RMP.

#### **1.6. Relationship to Other Statutes, Regulations or Plans:**

The proposed project is subject to the provisions under the Title 43 Code of Federal Regulations (CFR) Part 3809, Surface Management of the Public Lands under Operations of the General Mining Law. Under the requirements of these regulations, the operator must submit a plan of operations describing how activities would be conducted and the environmental resources would be protected to avoid unnecessary and undue degradation.

The activities described in the Plan of Operations (Wood, 2014) are subject to the Wyoming BLM Standard Mitigation Guidelines for Surface Disturbing Activities (Bureau of Land Management, 1987). The purpose of the "Standard Mitigation Guidelines" is

1. To reserve, for the BLM, the right to modify the operations of all surface and other human presence disturbance activities as part of the statutory requirements for environmental protection; and,
2. To inform a potential lessee, permittee, or operator of the requirements that must be met when using BLM - administered public lands.

The guidelines are written in a format that allows for their direct use as stipulations, and the addition of specific or specialized mitigation following the submission of a detailed plan of operations, and an environmental analysis.

The proposed operations are also subject to the rules and regulations of the State of Wyoming Land Quality Division (WDEQ-LQD) and the Wyoming Environmental Quality Act.

The BLM and the WDEQ-LQD operate under the guidelines of a Memorandum of Understanding approved and signed by both agencies in 1990 and amended in 2003.

The WDEQ-LQD would require a License to Explore (LE) and is responsible for establishing the reclamation bond for the proposed project with BLM concurrence.

Joint inspections by BLM and the WDEQ-LQD are provided for in the Memorandum of Understanding and are employed whenever logistically possible.

## 1.7. Identification of Issues and Resources:

BLM is directed by guidance, statute and regulation to describe the environment of area(s) to be affected or created by alternatives under consideration. CEQ regulations direct BLM to concentrate efforts on important issues, especially the presence or absence of the potentially significant resources presented in Table 1. All areas presented in Table 1 were considered, but many were determined to not be pertinent to the Proposed Action or affected to a degree of any importance, and therefore, were not carried forward for further analysis. If particular resources are not affected beyond minimal amount, or if the resource is not present, there will be no further discussion of the resources in the Affected Environment (Chapter 3), or in any of the subsequent impact analysis. The discussion of these environmental impacts is therefore restricted to topics related to resources which are affected and carried forward for analysis.

**Table 1.1. Potentially Significant Resources**

<b>RESOURCE</b>	<b>GUIDANCE OR AUTHORITY</b>
<b>Floodplains</b>	EO 11998; 10 CFR 1022
<b>Wetlands</b>	EO 11990; 10 CFR 1022, CEQ 1508.27(b)(3)
<b>Threatened, endangered, or candidate species and/or their critical habitat, and other special status (e.g., state-listed) species</b>	CEQ 1508.27(b)(9)
<b>Prime or unique farmland</b>	7 USC 4201; CEQ 1508.27(b)(3)
<b>State or national parks, forests, conservation areas, or other areas of recreational, ecological, scenic, or aesthetic importance</b>	CEQ 1508.27(b)(3)
<b>Wild and Scenic Rivers</b>	16 USC 1271; CEQ 1508.27(b)(3)
<b>Natural resources (e.g., vegetation, rangeland, soils, minerals, fish, wildlife, water bodies)</b>	CEQ 1508.8
<b>Coastal Zone areas</b>	16 USC 1451 et seq.
<b>Property of historic, archeological, or architectural significance (including sites on or eligible for the National Register of Historic Places and the National Registry of Natural Landmarks)</b>	EO 11593; CEQ 1508.27(b)(3)(8)
<b>Native American Concerns</b>	EO 13007
<b>Minority and low-income populations (including a description of their use and consumption of environmental resources)</b>	EO 12898
<b>Migratory Birds</b>	EO 13186

## **1.7.1. Identified Relevant Issues and Resources:**

### **1.7.1.1. Climate, Climate Change and Air Quality:**

Potential effects to climate and climate change have been identified in an Instruction Memorandum No. 2008-171 to include analysis of climate change in EA's. Potential short-term impacts to air quality during the mining operations and long-term impacts for the duration of the project's life were identified.

### **1.7.1.2. Wildlife including Migratory Birds, and BLM Special Status Species:**

Potential effects on wildlife have been identified by BLM wildlife biologists including: Sage Grouse nesting/brood rearing habitat, Sage Brush Obligates, and Migratory Birds.

### **1.7.1.3. Soil Resources:**

Potential loss of soil stability and fertility and increase in soil compaction could exist from soil disturbance activities during trench excavation/processing and truck and equipment activities in the Project Area. Exposed soil as a result of removing or disturbing the vegetation is more susceptible to water and wind erosion which causes a loss of soil fertility.

### **1.7.1.4. Vegetation Including BLM Wyoming Special Status and Noxious/Invasive Plants:**

Potential degradation of vegetation resources is possible during operations. The establishment or increase in noxious/invasive plants in the project area could be caused by removal or disturbance of vegetative cover or indirect from vehicles traveling to and from project sites acting as seed sources or carriers.

### **1.7.1.5. Water (Groundwater and Surface water):**

Interactions between shallow groundwater and the proposed trenching is possible. Where surface disturbance occurs, surface water run off could reach nearby drainages during large storm events from portions of the trenches and processing areas resulting in indirect effects to surface water. Additionally, because water would be pulled from Rock Creek and hauled to the project area, a minor amount of water would be consumed from Rock Creek as a result of the Proposed Action.

### **1.7.1.6. Wetlands and Riparian areas:**

One potential wetland area consisting of a freshwater emergent wetland is mapped by the National Wetlands Inventory just down-drainage of the project area, and the possible impacts to this area should be evaluated.

### **1.7.1.7. Visual Resources**

The Project Area occurs in Visual Resource Management Class II Designation. The objective of Class II designation is to retain the existing character of the landscape. The level of change to

the characteristic landscape would be moderate. Management activities may attract attention but should not dominate the view of the casual observer.

## **1.7.2. Resources Considered But Eliminated From Further Analysis:**

These issues were considered for analysis during the scoping process; however, the issues were eliminated from additional analysis including consideration under the affected environment or environmental consequences for the reasons described below under each resource.

### **1.7.2.1. Floodplains**

No floodplains were observed or identified in the project area.

### **1.7.2.2. Prime or Unique Farmland:**

No prime or unique farmlands were observed or identified in the project area.

### **1.7.2.3. Wild and Scenic Rivers:**

No Wild and Scenic Rivers as identified in the LFO ROD and RMP (2014) were observed or identified in the project area.

### **1.7.2.4. Coastal Zone Areas:**

No Coastal Zone Areas were observed or identified in the project area.

### **1.7.2.5. Minority and Low-Income Populations:**

Because the project is located in an unpopulated area and would not employ anyone, impacts to minority and low-income populations would be very minimal.

### **1.7.2.6. State, or Natural Parks, Forests, Conservation Areas, or Other Areas of Recreational, Ecological, Scenic or Aesthetic Importance:**

No areas relating to these criteria were observed or identified in the project area.

### **1.7.2.7. Sites of Ecological, Scenic, or Aesthetic Importance**

No areas relating to these criteria were observed or identified in the project Area.

### **1.7.2.8. Vegetative and Wildlife Resources — Threatened and Endangered Species**

BLM Wildlife Biologist determined that no threatened, endangered, or listed species or habitats protected under the Endangered Species Act are present in the project area.

*Chapter 1 Purpose and Need for Action:  
Resources Considered But Eliminated From  
Further Analysis:*

### **1.7.2.9. Rangeland Resources:**

The effects to rangeland resources was considered minor, and no impacts would occur to rangeland facilities or to grazing activities by this action.

### **1.7.2.10. Socioeconomics:**

Because of the small-scale of this operation any impacts to socioeconomics would be very minor.

### **1.7.2.11. Wild Horses:**

The project area is outside of any wild horse herd management areas, and no impacts to wild horses are anticipated.

### **1.7.2.12. Geological Resources:**

There are no anticipated geologic hazards or unique geologic features that could potentially be impacted by the Proposed Action or any of the alternatives.

### **1.7.2.13. Cultural and Paleontological Resources:**

This area is within a previously disturbed mining area. Because this site has been previously disturbed, does not penetrate bedrock, and is within quaternary alluvial gravel deposits or Precambrian bedrock where fossilization is impossible, the potential impacts to paleontological resources is low, and there are no temporary, short-term, long-term or cumulative effects anticipated. This project would not harm any significant historic sites and no impacts to significant cultural resources were identified during the field investigation. However, in order to ensure that no impacts to cultural resources occur, the following measure would apply:

#### **Cultural Mitigation 1:**

Any cultural and/or paleontological resources (historic or prehistoric site or object fossil) discovered by the holder, or any person working on his behalf, on public or Federal land shall be immediately reported to the authorized officer. Holder shall suspend all operations in the immediate area of such discovery until written authorization to proceed is issued by the authorized officer. An evaluation of the discovery would be made by the authorized officer to determine appropriate actions to prevent the loss of significant cultural or specific values. The holder would be responsible for the cost of evaluation and any decision as to proper mitigation measures shall be made by the authorized officer after consulting with the holder.

## **1.8. Decisions to be Made:**

Once the submitted Plan of Operations met the standards for completeness per the 43 CFR 3809.401 content standards, BLM's decision-making is limited to:

- Determining whether the proposed action would or would not result in unnecessary and undue degradation, using the performance standards in 43 CFR 3809.420 as criteria and then either approve or request modification of the plan until the standards are met, and

- Determining whether the occupancy associated with the proposed action meets the criteria and tests set forth in 43 CFR 3715. BLM would determine whether the operator has complied with the requirements of this subpart together with its decision approving or modifying the plan

## **1.9. Scoping and Public Involvement:**

Following the requirements set forth under the Title 43 Code of Federal Regulations (CFR) Part 3809.5, a plan of operations was submitted by the project proponent on August 22, 2014. The plan was reviewed for completeness per the specific requirements found in 43 CFR 3809.401 and determined complete on September 10, 2014. As directed by 43 CFR 3809.411(c), following the receipt of the complete plan of operations, a notice of availability of the plan was published in a newspaper of local circulation or published in a NEPA document.

The notice of availability for the Plan of Operations was published in one local paper, the Lander Journal, on September 14, 2014. No public comments on the plan of operations were received. The comment period ended October 14, 2014.

The project was internally scoped in the Lander Field Office with meetings held between BLM staff.

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## **Chapter 2. Description of Alternatives, Including Proposed Action:**

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## **2.1. Introduction:**

Chapter 2 describes in detail the Proposed Action and alternatives and compares the alternatives in terms of the environmental impacts as identified in Section 1.8, Identification of Issues.

The alternatives described in chapter two consist of:

1. Alternative A- No Action Alternative
2. Alternative B- Proposed Action Alternative

## **2.2. Description of Alternatives, Including the Proposed Action and No Action:**

### **2.2.1. Alternative A- No Action:**

Under the no action alternative, the Crow Foot Mining Plan of Operations would not be allowed on BLM administered surface which comprises 100% of the project area. Therefore, the BLM would be denying the proponent's right to extract minerals on federal lands. The selection of the No Action alternative may constitute a taking because it violates valid existing rights under the U.S. Mining Laws and result in legal action by the proponent.

Under the No Action alternative, existing land and resource use activities within the project area would continue generally as is, and the operator would be limited to casual use activities which do not allow for mining, only exploration. The Affected Environment descriptions presented in this EA, thus, also constitute the effects of the No Action alternative. The No Action alternative is analyzed in detail in this EA.

The No Action alternative could be selected by the BLM, but such selection must clearly demonstrate that the proposal as designed would cause significant adverse impacts resulting in unnecessary or undue degradation of the public lands or resources. It would then be incumbent upon the proponent to redesign the proposed action to ensure unnecessary and undue degradation does not occur.

### **2.2.2. Alternative B- Proposed Action:**

The Proposed Action consists of the Plan of Operations (Plan) for activities related to the extraction of valuable gold deposits that would constitute approximately 5 acres of total disturbance over the 6 year life of the project. The complete description of the Proposed Action including detailed maps can be found in Mr. Wood's complete Plan of Operations and is summarized below.

#### **2.2.2.1. Operating Plan:**

The Plan consists of excavating one, 10ft by 20ft trench up to 6ft in depth, at a time near a local high point known as Crow's Nest. A small, portable wash plant would be used to process gold-bearing ore directly from the trench, and the trench would be reclaimed. Very little water would be used in order to run the plant, and all water would remain within the trench. A small

*Chapter 2 Description of Alternatives,  
Including Proposed Action:  
Introduction:*

laydown-yard would be utilized for storage up-gradient from the trenches. Several different areas could be utilized to dig the trenches. Up to six trenches would be dug in one year. Water for operating would be hauled from an existing use permit on private lands on Rock Creek.

#### **2.2.2.2. Schedule**

The operations would commence fall 2014 or summer 2015, once the Plan is approved. Operations would occur from approximately September 1 to November 1 yearly for 6 years. Operations would occur during the weekends or approximately 2 days per week during the operating season.

#### **2.2.2.3. Equipment**

The following equipment would be used for operations: one large 3/4 yard Back hoe, one shed for tool storage, one self contained screen wash plant with a two inch gas powered water pump, one porta-john facility, and up to two camp trailers. The camper trailers would only be on-site during operations, likely two days a week. All of the equipment would be removed after the operating season.

#### **2.2.2.4. Water Management**

Water would be pumped from private lands on Rock Creek and hauled to the project for use in the wash plant where it would be recirculated into the trench and allowed to evaporate and seep into the ground. No discharge from the operation is anticipated. Water hauled from Rock Creek would be very minimal (less than 0.2 gallons per minute or enough to fill up to two, 300 gallon tanks during the operating season). One small pond might be constructed on-site using an existing depression in the ground to store water and minimize haul trips. This storage pond would be lined appropriately.

#### **2.2.2.5. Rock and Soil Handling Plans**

Topsoil would be salvaged and stockpiled temporarily prior to disturbances. Gravel and rock would be stockpiled adjacent to the trench. Large rock and ore bearing gravels would be separated by use of the wash plant. All rocks and tailings would be circulated back into the trench and covered with topsoil.

#### **2.2.2.6. Reclamation Plan**

Only six trenches would be excavated during one operating season, and only one trench would be open at one time. Reclamation would occur concurrently with operations. Topsoil would be salvaged prior to operations and it would be replaced and seeded after operations in the fall. Steep slopes and erosion are not anticipated to be issues during reclamation because of the relatively barren and flat landscape the Proposed Action would affect.

#### **2.2.2.7. Monitoring Plan**

The operator would comply with all relevant federal, state, and local regulations during mining activities, and would notify the proper authorities if there are any issues during mining. Sustained

monitoring plans are not anticipated. Routine inspections to ensure plan compliance shall be conducted jointly by BLM and WDEQ personnel.

**2.2.2.8. Interim Management Plan**

Seasonal closures would occur from November 1 to August 31 yearly. All equipment would be removed prior to this time and all trenches would be reclaimed.

**2.4. Alternatives Considered, But Eliminated From Further Analysis:**

Alternatives to the proposed action are limited to those actions that would not limit the proponent’s ability to extract valuable gold deposits on their mining claims. Therefore, the alternatives were limited to the Proposed Action and No Action Alternatives.

**2.5. Comparison of Alternatives:**

**Table 2.1. Table of Comparison of Alternatives**

<b>Alternative</b>	<b>Major Features</b>	<b>Impacts</b>
Alternative A- No Action Alternative	<ul style="list-style-type: none"> <li>● Deny Plan of Operations</li> <li>● Continue casual use activities only</li> </ul>	<ul style="list-style-type: none"> <li>● Result in the existing environment</li> </ul>
Alternative B- Proposed Action Alternative	<ul style="list-style-type: none"> <li>● 5 acres of total disturbance including existing disturbance</li> <li>● Occupancy of the site during the operating season</li> </ul>	<ul style="list-style-type: none"> <li>● Impacts to soils, veg, habitat related to 5 acres of disturbance</li> <li>● Mining and processing impacts to air resources</li> <li>● Erosion and sedimentation</li> <li>● Water consumption</li> </ul>

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# **Chapter 3. Affected Environment and Environmental Impacts:**

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### **3.1. Introduction:**

This section describes the current conditions, organized by resources, as identified in Section 1.7, Identification of Issues that could be affected by the Proposed Action and the No Action Alternative.

#### **3.1.1. General Setting:**

The project area is located near the Crow's Nest approximately 12 miles east of Atlantic City, Fremont County, WY. This is an historic gold mining area known as the Crow's Nest and the project area has been heavily mined in the past for both placer gravels along the drainages and through the use of several underground gold mines in the area. Several of the features at the Crow's Nest are identified for reclamation by the WDEQ - Abandoned Mine Lands Program (AML) within the next several years. These features consist of several collapsed underground workings with some timbering and associated tailings piles. The proponent understands that if he disturbs or affects these existing features slated for reclamation by AML, he would become responsible for the reclamation of these features and be adequately bonded for such. Other uses of the area include recreational mining (panning), livestock grazing, wildlife habitat, and other recreation activities (primarily hunting).

#### **3.1.2. Resources/Issues Brought Forward for Analysis:**

The level of resources presented are ordered and addressed in the same order presented in Chapter 1. Resources that are not impacted are not of concern in the project area and are not discussed below (see Chapter 1).

#### **3.1.3. General Impact Analysis Assumptions and Guidelines:**

This section is based on the resource specialists' reports and provides the analytical basis for comparison of the alternatives. The section organizes the resources as identified in Chapter 1.0; Section 1.7 Identification of Issues, and compares the general current conditions to impacts between the Proposed Action and No Action Alternative. However, because the Plan of Operations would likely not result in undue or unnecessary degradation of public lands, and the selection of the No Action Alternative could result in a taking, the No Action Alternative is not analyzed in detail.

Impacts, both beneficial and adverse, have been categorized according to the phase of development and duration of activities on the resources. Temporary impacts would be defined in this section as impacts that occur during mining and processing operations (2 days at a time, weekend activities). Short term impacts would be defined as impacts to the resources that persist after mining and processing operations have been completed in a yearly manner and remain until the site is properly winterized each fall. Therefore, short term impacts primarily consist of the operating season, or four months per year. Long term impacts would be defined as the duration of the project's life (6 years) plus enough time for reclamation to be determined complete. Therefore, long term impacts could last up to 10 years.

Impacts are also categorized as being direct or indirect, and beneficial and adverse. This analysis identifies these types of impacts and compares the alternatives accordingly. Direct impacts are

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those that are caused by the action and occur at the same time and place. Indirect impacts are those impacts which are caused by the action and are later in time or further removed in distance, but are still reasonably foreseeable. Sometimes it is difficult to separate these impacts, and so the impacts may be described together. Because this is a proposed mining operation meant to benefit the proponent, there are very little beneficial impacts anticipated as a result of either of the alternatives.

### 3.1.4. Cumulative Impacts:

Cumulative impacts refer to impacts on the environment which result from the incremental impacts of the Proposed Action when added to other past, present and reasonably foreseeable future actions. The Cumulative Impacts Analysis Area (CIAA) and Cumulative Impacts Temporal Boundary (CITB) may be different for each resource and would be defined accordingly.

There are several similar projects in the area that could be considered Reasonably Foreseeable Future Developments (RFFDs) and existing operations within the CIAA and CITB such as the Gunyan-Crow's Nest Gulch Placer Mining Plan of Operations(WYW168291), reclamation of abandoned mines by the WDEQ- Abandoned Mine Lands Program (AML), and recreational placer activities along Strawberry Creek completed by members of the Wyoming Prospector's Association.

## 3.2. Climate, Climate Change and Air Quality:

### 3.2.1. Description of Climate, Climate Change and Air Quality Resources:

**Climate:** The project area is located near a local high-point, Crow's Nest, in a semi-arid, high mountain desert, mid-continental climate regime. The area is typically dry, windy, and has long, cold winters. The nearest meteorological monitoring station is located several miles to the north at South Pass. Average annual precipitation is 11 inches. Most precipitation occurs in this region in the spring and winter months. Average temperatures range between 4.1 degrees F and 34.6 degrees F in January and between 50.8 degrees F and 86.7 degrees F in July. Prevailing wind in this region is west-southwest.

**Climate Change:** A growing body of evidence indicates that Earth's atmosphere is warming. Records indicate that temperatures in the Wyoming region have risen approximately 1.5 degrees F since the 1960 to 1979 baseline years (GCRP, 2009b). Concentrations of certain gases in Earth's atmosphere have been identified as being effective at trapping heat reflected off Earth's surface, thereby creating a "greenhouse effect." Climate change is likely to combine with other human-induced stressors to further increase the vulnerability of ecosystems to other pests, invasive species, and loss of native species.

**Air Quality:** Air quality in the area is currently very good, but impacts do exist by being close to South Pass highway and activities that occur around Atlantic City. The extent to which these factors may impact air quality on any given day is dependent primarily on activity, wind conditions, topography, and soil moisture levels.

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### **3.2.2. Impacts to Climate, Climate Change, and Air Quality under Alternative A- No Action:**

#### **3.2.2.1. Direct and Indirect Impacts:**

The No Action Alternative would result in continuing trends of climate and air quality resource conditions.

#### **3.2.2.2. Cumulative Impacts:**

The No Action Alternative would result in continuing trends of climate and air quality resource conditions.

### **3.2.3. Impacts to Climate, Climate Change, and Air Quality under Alternative B- Proposed Action:**

#### **3.2.3.1. Direct and Indirect Impacts:**

**Climate and Climate Change:** Existing impacts and trends on climate and climate change are much greater than anticipated to occur under the proposed action; however, Greenhouse Gas (GHG) emissions associated with equipment used during mining and processing operations would occur. An attempt to analyze the impacts of GHG emissions and other climate change factors that result from the consumption of fossil fuels and other resources produced from the project area would be a highly speculative exercise unnecessary for the land management decisions for which the BLM is responsible. The effects from consumption are not only speculative but beyond the scope of the agency authority or control.

**Air Quality:** Impacts to air quality in the immediate area being worked would result from dust and fumes from vehicles and excavation equipment employing internal combustion engines. Once on-site, only the dust and exhaust resulting from the individual backhoe excavations would contribute to air quality impacts. The duration of these activities indicates that impacts are expected to be temporary but after stockpiling and leaving exposed soils subject to wind erosion, the impacts could continue to be short term as particulate matter is picked up by wind during exposure. However, these impacts would not continue after reclamation or last into the long term.

#### **3.2.3.2. Cumulative Impacts:**

**Climate and Climate Change:** The CIAA and CITB for climate and climate change is within 100 km of the project area and could continue for 10 years. The CIAA and CITB were selected based on guidance from the Instruction Memorandum No. 2008-171 and the relative proximity of the project to other similar features and air-sheds. Climate change is a global phenomenon impacted by human activities and natural changes around the Earth and the surrounding atmosphere. Analysis of impacts to such a large scale process is beyond the scope of this EA. Because the project area lies in an area of very little development, other BLM and non-BLM past, present and reasonably foreseeable future actions are expected to increase emissions of Greenhouse Gases in the surrounding area especially when considering past actions like the Atlantic City Iron Mine within the CIAA. The Proposed Action would add incrementally or very

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minutely to the cumulative impacts to climate change in the CIAA. Initial impacts during the mining from equipment would be the most pronounced, but these would decrease rapidly after these activities are completed.

**Air Quality:** The CIAA for air quality is the area within 100 km of the project area. The CITB for air quality in the area is the proposed time frame (10 years). The CIAA and CITB were selected based on guidance from the Instruction Memorandum No. 2008–171 and the relative proximity of the project to other similar features and air-sheds. The nearest Class 1 air-shed as determined by the State of Wyoming, the Popo Agie Wilderness Area, is approximately 20 miles to the northwest. Because the project area lies in an area of very little development, other BLM and non-BLM past, present, and reasonably foreseeable future actions are expected to increase emissions of pollutants in the surrounding area especially when considering past actions like the Atlantic City Iron Mine in the CIAA. The Proposed Action would add incrementally if not minutely to the cumulative impacts to air quality in the CIAA. Initial impacts during the mining and processing would be the most pronounced, but these would decrease rapidly after these activities are completed.

### **3.3. Wildlife Including, Migratory Birds, and BLM Special Status Species:**

#### **3.3.1. Description of Wildlife Including, Migratory Birds, and BLM Special Status Species:**

No threatened, endangered, or proposed wildlife or plant species protected under the Endangered Species Act were identified within the Project Area. The project is also outside of sage grouse core area or winter habitat areas, but is within sage grouse nesting/brood-rearing habitat. The following BLM Special Status sensitive species have potential habitat within the project area , but no individuals have been positively identified: Sagebrush Obligates (Sage Thrasher, Loggerhead Shrike, Sage Sparrow, Brewer’s Sparrow) and Migratory Birds (within basin prairie shrub, mountain foothill shrub habitat).

#### **3.3.2. Impacts to Wildlife Including, Migratory Birds, and BLM Special Status Species under Alternative A- No Action:**

##### **3.3.2.1. Direct and Indirect Impacts:**

The No Action Alternative would result in the existing impacts and trends to wildlife including, migratory birds, and BLM special status species.

##### **3.3.2.2. Cumulative Impacts:**

The No Action Alternative would result in the existing impacts and trends to wildlife including, migratory birds, and BLM special status species.

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### **3.3.4. Impacts to Wildlife Including, Migratory Birds, and BLM Special Status Species under Alternative B- Proposed Action:**

#### **3.3.4.1. Direct and Indirect Impacts:**

Direct impacts to wildlife would be considered those impacts that result in mortality or lowered breeding success of wildlife. Through implementation of the proposed action these impacts might include: hitting wildlife on roads during travel; harming or killing wildlife that might fall into pits or other hazards opened during operations; or destroying known nests or significant habitat to the point that the individuals are impacted.

Indirect impacts are those that might not be immediately apparent to individual species but might decrease the breeding success or cause a decline in species' range and diversity through time and continued development. Through implementation of the Proposed Action these impacts might include: disturbing valuable wildlife habitat or nests that would result in decreased breeding success by limiting the habitat and range of a species or impacting water resources that wildlife rely on for survival.

Because surface disturbance and activities planned are fairly minor and no species of concern have been identified within the project areal, direct impacts to wildlife would be minimal but could occur through wildlife interacting with the existing open pits or mining equipment during operations. Removal of habitat of sage grouse, migratory birds, and sagebrush obligates is an inevitable impact as a result of the proposed action and would result in indirect impacts to those species. Noise from construction activities and increased vehicular traffic is expected to have a direct temporary effect on wildlife in the form of displacement and stress concentrated within the project area. Therefore the following mitigation measures would be applied:

**Wildlife Mitigation 1:** Surface disturbing and/or disruptive activities that have the potential to cause destruction of nests, eggs or young of migratory birds would be prohibited during the period of May 1st to July 15th. A survey of the proposed disturbance areas may be conducted by the proponent to determine the presence/absence of nesting migratory birds. Nest surveys must be conducted no more than 7 days prior to surface disturbing and/or disruptive activities.

#### **3.3.4.2. Cumulative Impacts:**

The CIAA for wildlife would vary depending on species, but is generally the South Pass ACEC of which the project is a part because of the similar critically important values for wildlife for which the ACEC was created. The CITB for wildlife is approximately 10 years or for the life of the project allowing for reclamation.

Most of the cumulative impacts to wildlife within the CITB and CIAA are attributed to past and current mining activities in the area. This project would cumulatively add to impacts to wildlife from past, present, and reasonably foreseeable future actions if operated during sensitive time frames; however, considering the scale of the activities and the fact that activities would not occur during sensitive time frames, the project would not significantly add to cumulative impacts to wildlife.

## **3.4. Soil Resources:**

### **3.4.1. Description of Soil Resources:**

One ecological sites dominates the project area location, sagebrush-steppe, which has 10–14 inches of precipitation per year. According to the Natural Resources Conservation Service's (NRCS, 2014) Web Soil Survey online database, the soils within the permit areas consist of Irigul-Midelight-Rock outcrop association, rolling (166) and Uhl-Gelkie loams, 1 to 8 percent slopes (217) units. The Irigul-Midelight-Rock outcrop association consists of a residuum weathered from granite with channelly-loam soils and unweathered bedrock. The Uhl-Gelkie unit is a loam derived from alluvium and mixed alluvium. Although some of the soils within the project area have been historically mined and disturbed, and it is obvious that little to no topsoil salvage occurred during these activities, the soils in these areas support substantial vegetation growth that is indistinguishable from the surrounding area vegetation.

### **3.4.2. Impacts to Soil Resources under Alternative A- No Action:**

#### **3.4.2.1. Direct and Indirect Impacts:**

The No Action Alternative would result in continuing trends of soil resource conditions.

#### **3.4.2.2. Cumulative Impacts:**

The No Action Alternative would result in continuing trends of soil resource conditions.

### **3.4.3. Impacts to Soil Resources under Alternative B- Proposed Action:**

#### **3.4.3.1. Direct and Indirect Impacts:**

The most direct impacts to soils occur during construction and site preparation (topsoil stripping) that destroys the soil horizons and mixes the soil layers. This procedure dramatically reduces chemical and biological processes. In addition, stripping and subsequently stockpiling the soils results in mixing of the soil layers which then accelerates loss of important plant sustaining nutrients. Direct impacts would occur during topsoil stripping of the proposed trenching areas and laydown yard. Approximately 0.5 acres would be disturbed per season resulting in short term impacts to topsoil during this time, but topsoil would be replaced and seeded yearly. Approximately 5 acres of topsoil would be removed or compacted throughout the life of the project resulting in long term impacts that would be minimized through proper topsoil handling techniques. Other direct but short term if not temporary impacts to soil occur through erosion at these locations and would be minimized during reclamation and managed appropriately if identified during inspections. See Section 3.7, Water Resources, for more discussion on erosion. The previously impacted soils within the project area that are a result of historic mining activities are not considered a hindrance to this project's development and reclamation potential because these soils do not appear to inhibit plant growth in the area.

Other direct long term impacts to soil might occur if contaminants such as fuels and lubricants spill into the soil. These spills inherently occur at a sites such as these, but measures would be taken to eliminate these spills or clean up existing spills making these impacts to soils infrequent and minor.

### **3.4.3.2. Cumulative Impacts:**

The CIAA for soil resources is the project area because surface disturbance would be limited to that area and very little other disturbance occurs within the area surrounding the project area. The CITB for soil resources is the time period required for successful revegetation of the sites disturbed areas (10 years). Most of the cumulative impacts to soils within the CITB and CIAA are a result of past mining activities that have not been reclaimed, were reclaimed poorly, or are future AML activities. However, the past disturbance has naturally re-vegetated despite likely soil mixing and inadequate topsoil salvage. Therefore, the existing soil conditions would not greatly influence the cumulative impacts within the CIAA when added to the project impacts.

## **3.5. Vegetation Resources Including Special Status Species and Noxious/Invasive Plants:**

### **3.5.1. Description of Vegetation Resources Including Special Status Species and Noxious/Invasive Plants:**

Vegetation within the project area is mostly composed of shrubs such as sagebrush at the outskirts of the disturbance area, some willows occur within the old shafts, and significant grasses in the drainages. The trench area is within the Inter-Mountain Basins Montane Sagebrush Steppe (shrub lands) Ecological System which typically contains of one or more tree species and sagebrush with an understory dominated by grasses such as western wheatgrass and indian rice grass. No BLM Sensitive plant species have been identified in the project area.

No noxious/invasive plants have been identified within the Project Area.

### **3.5.2. Impacts to Vegetation Resources Including Special Status Species and Noxious/Invasive Plants under Alternative A- No Action:**

#### **3.5.2.1. Direct and Indirect Impacts:**

The No Action Alternative would result in continuing trends of vegetation resources conditions.

#### **3.5.2.2. Cumulative Impacts:**

The No Action Alternative would result in continuing trends of vegetation resources conditions.

### **3.5.3. Impacts to Vegetation Resources Including Special Status Species and Noxious/Invasive Plants under Alternative B-Proposed Action:**

#### **3.5.3.1. Direct and Indirect Impacts:**

Direct short term impacts to vegetation as a result of topsoil stripping would occur until reclamation is successful on the total approximately 5 acres of disturbance throughout the life of the project. Once reclamation occurs, vegetation recovery would likely be slow especially for shrubs like sagebrush; however, the proponent's reclamation plan would include seeding of sagebrush. Noxious/invasive plants are currently not a problem but could appear in the disturbed areas as a result of the proposed action resulting in direct impacts that would only occur in the short term until reclamation. Management of these weeds would be mandated by BLM as they are identified during inspections. However, to ensure that any weeds identified during inspections are managed appropriately the following mitigation measure would be implemented:

#### **Noxious/Invasive Plants Mitigation 1:**

The operator/holder would be responsible for managing all noxious and undesirable invading plant species in the reclaimed areas, including cheat grass, until the vegetation activities have been determined to be successful. If noxious or invasive weeds are encountered, the BLM and/or the County Weed and Pest Department would be consulted by the operator/holder for suppression and control methods. If chemical herbicide control methods are used on public land, only BLM approved chemicals and application methods would be permitted. A Pesticide Use Proposal (PUP) and written approval from the Authorized Officer for the use of herbicides must be obtained prior to usage of herbicides.

If transport of weeds is identified, mobile equipment being transported from an offsite location to the BLM project area should be cleaned prior to arrival using water, steam, or air pressurized cleaning methods to remove any invasive or noxious weed seed and plant parts or materials that could contain seeds or plant parts. When appropriate, identify sites generally off public lands where equipment can be cleaned. Seeds and plant parts need to be collected and disposed of appropriately.

All mulch, seed and other vegetative reclamation materials must be certified weed free. If available any sand, gravel, or fill materials brought on-site shall be certified weed free.

In addition, the following weeds need to be controlled should they begin to grow in the project areas: <http://www.wyoweed.org/weeds/state-designated-weeds>

#### **3.5.3.2. Cumulative Impacts:**

The CIAA for vegetation is the greater Crow's Nest area including other similar projects (Gunyan, Crow's nest Gulch Plan) and future AML projects because of the potential for weeds to be transported between projects or from the adjacent County roads. The CITB for vegetative resources is the time period required for successful reclamation to occur (~10 years). Cumulative impacts to vegetation occur from vegetation removal primarily related to nearby mining and AML activities in the area. With an increase in disturbance and traffic associated with activities in the CIAA, comes an increased potential for weeds to establish in this area. However, the

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Fremont County Weed and Pest would continue to spray and manage weeds along County roads where they are most prevalent within the CIAA, and better weed management solutions in the future might decrease these impacts.

### **3.6. Water Resources:**

#### **3.6.1. Description of Water Resources:**

**Surface Water:** The project area is within an ephemeral or non-running channel of Strawberry Creek which eventually flows to the Sweetwater River. The Sweetwater River is a Class 1 river as determined by the WDEQ- Water Quality Division. Class 1 rivers are considered important water sources where no further water quality degradation by point source discharges would be allowed. The drainages within the project area have been significantly altered by past mining activities, and water only runs through these short drainages in the spring during immediate snow-melt. Strawberry Creek downstream of the Project Area has numerous channels and meadows where water dissipates into the subsurface before re-appearing down-drainage where the creek gets steeper and channelized. Therefore, Strawberry Creek water is generally considered pretty good. Use of water from Rock Creek is planned to occur on private lands approximately 13 miles from the project area, or approximately one mile directly south of Atlantic City. Some mercury was identified in Rock Creek in the past, but according to the WDEQ- Water Quality Division no mercury has been identified in the last several years. Rock Creek is a Class 2AB river that drains 14.6 square miles and averages 214 cfs flow rates during the summer months (USGS, 2014). Class 2AB rivers, as determined by the WDEQ- Water Quality Division, are those waters that are known to support game fish populations or spawning and nursery areas at least seasonally.

**Groundwater:** It is possible that shallow groundwater exists within the unconsolidated alluvium in the drainages within the project area. This groundwater is likely directly influenced by snow melt within and up-gradient of the Project Area and is likely only present in the spring and early summer months.

#### **3.6.2. Impacts to Water Resources under Alternative A- No Action:**

##### **3.6.2.1. Direct and Indirect Impacts:**

The No Action Alternative would result in continuing trends of water resource conditions.

##### **3.6.2.2. Cumulative Impacts:**

The No Action Alternative would result in continuing trends of water resource conditions.

### **3.6.3. Impacts to Water Resources under Alternative B- Proposed Action:**

#### **3.6.3.1. Direct and Indirect Impacts:**

**Surface Water:** Indirect impacts to Strawberry Creek could occur as a result of the Proposed Action through disrupting ephemeral flow in the drainages to end up in Strawberry Creek. However, these impacts would be minimal because the proposed operating season would only be from September to November. Direct impacts to Rock Creek would occur by the operator pulling small amounts of water from the creek and consuming the water on site. Considering the average flow in Rock Creek in the summer months is 214 cfs and no more than 0.2 cfs would be pulled from the creek during the three month operating season (0.09%), these impacts would be minor to negligible.

**Groundwater:** Direct impacts to the shallow groundwater system in the alluvium of the project area drainages could occur through excavating trenches below the water table. These excavations could create sedimentation within this unconfined aquifer system; however, these impacts would be short term since the trenches would be reclaimed concurrently. The project schedule is late enough in the season (beginning September) that there might be no shallow groundwater to intercept.

#### **3.6.3.2. Cumulative Impacts:**

The CIAA for water and groundwater would be the Strawberry Creek drainage basin which the project is within the upper reaches of and would be the limit of the possible extent of impacts to water resources. Within this drainage system there are very few, if any, proposed projects that would add to the cumulative impacts to water besides possibly some future AML projects. These future projects might impact surface water by increasing sedimentation within Strawberry creek and disrupting shallow, seasonal groundwater flow in a similar fashion to the Proposed Action. These impacts would be minor considering AML operations would result in minor short-term surface disturbance that consists of reclaiming old-abandoned sites that might already be contributing to impacts to water resources. Therefore, any cumulative impacts to water would be negligible.

## **3.7. Wetlands and Riparian Areas**

### **3.7.1. Description of Wetland and Riparian Areas:**

The project area is not within a wetlands area but is upstream of the upper reaches of Strawberry Creek where several small wetland features are identified by the National Wetland Inventory (NWI) and have standing water and vegetation such as willows and tall grasses. These small wetland features are approximately 1/4 mile downstream of the Proposed Action. Because the project area drainages were previously mined, a dike was constructed at the confluence of the main two drainages within the project area. The area dammed by the dike has a very small drainage area and therefore does not collect much water or have characteristics of a wetland, but the dike might help slow down water flow or allow infiltration of water that might eventually end up at the downstream wetland areas mentioned above. Therefore, the dike might act as a

mechanism that helps to maintain viability of the downstream wetland areas through collecting water that infiltrates into the nearby wetland areas and/or impede surface water flows that eventually contribute to the wetlands.

### **3.7.2. Impacts to Wetland and Riparian Areas under Alternative A- No Action:**

#### **3.7.2.1. Direct and Indirect Impacts:**

The No Action Alternative would result in continuing trends of wetland and riparian resource conditions.

#### **3.7.2.2. Cumulative Impacts:**

The No Action Alternative would result in continuing trends of wetland and riparian resource conditions.

### **3.7.3. Impacts to Wetland and Riparian Areas under Alternative B- Proposed Action:**

#### **3.7.3.1. Direct and Indirect Impacts:**

Direct impacts through disturbance would occur in the drainage area of the dike or mining activities could occur to the dike itself. This might cause indirect impacts to the downstream wetland areas along Strawberry Creek by disrupting shallow groundwater flow that reaches the downstream wetland system or increasing sedimentation in surface waters that reach the wetland area. Because of the distance between the wetlands and Proposed Action disturbances, any sedimentation would likely fall out of suspension prior to reaching the wetland. However, mining through or removing the dike could decrease the flow to the wetland or otherwise change the characteristics of the drainage that reaches the wetland. Regardless any changes to this system would be temporary and minor considering the Project area is a small portion of the Strawberry Creek drainage area and activities would only occur between September and November when there is a low likelihood for any water to occur within the Project Area either in shallow groundwater system or surface waters.

#### **3.7.3.2. Cumulative Impacts:**

The CIAA for wetlands and riparian areas would be the Strawberry Creek drainage which the project is within the upper reaches of and would be the limit of the possible extent of impacts to wetland/riparian resources. The cumulative impacts would be similar to those described in Water section 3.6, and are therefore not repeated here.

## **3.8. Visual Resources**

### **3.8.1. Description of Visual Resources**

The Project Area occurs in Visual Resource Management Class II Designation as designated in the LFO RMP (2014). The objective of Class II designation is to retain the existing character of the landscape. The level of change to the characteristic landscape could be moderate. Management activities may attract attention but should not dominate the view of the casual observer. Any changes that may repeat the basic elements of form, line, color, and texture found in the predominant natural features of the characteristic landscape.

### **3.8.2. Impacts to Visual Resources under Alternative A- No Action:**

#### **3.8.2.1. Direct and Indirect Impacts**

The No Action Alternative would result in continuing trends of visual resource conditions.

#### **3.8.2.2. Cumulative Impacts**

The No Action Alternative would result in continuing trends of visual resource conditions.

### **3.8.3. Impacts to Visual Resources under Alternative B- Proposed Action:**

#### **3.8.3.1. Direct and Indirect Impacts:**

The RMP designated the area covered under this project area as Visual Resource Management Class II. Normally, a project in a Class II area is not authorized unless a visual simulation and contrast rating worksheet can demonstrate that the project and associated impacts comport to the visual resource objectives for the area. However, based on the requirements of the 43 CFR 3809 regulations the project would not result in undue or unnecessary degradation to visual resources, and, therefore, no additional analysis, restrictions, or mitigation measures are needed.

#### **3.8.3.2. Cumulative Impacts:**

The CIAA for visual resources would be the South Pass ACEC which was created to protect a variety of resources including visual resources and would thus be the limit of the potential for cumulative impacts. The CITB for visual resources would be 10 years or long enough to allow for successful reclamation. The cumulative impacts from RFFD and existing developments would be minimal with the addition of this project especially considering the temporary nature of this project and small scale of operations as compared to some of the other projects within the CIAA. Therefore, cumulative impacts to visual resources would be minor.

### **3.9. Unavoidable Adverse Impacts (All Resources):**

NEPA section 102(c) mandates disclosure of “any adverse environmental effects which cannot be avoided should the proposal be implemented” These are impacts for which there are no mitigation measures or impacts that remain even after the implementation of mitigation measures. Implementation of the Proposed Action would result in unavoidable adverse impacts to some resources.

The CEQ 40 CFR 1500.2(e) regulations define unavoidable adverse impacts as those that cannot be avoided due to constraints in alternatives. These impacts do not have to be avoided by the planning agency, but they must be disclosed, discussed, and mitigated, if possible.

#### **3.9.1. Unavoidable Adverse Impacts Under Alternative A- No Action:**

Unavoidable adverse impacts to soils and vegetation would continue through the exposure of the un-reclaimed previous disturbance under the No Action alternative.

#### **3.9.2. Unavoidable Adverse Impacts Under Alternative B- Proposed Action:**

There would be some unavoidable adverse impacts to soils, vegetation, wildlife, and water resources through surface disturbance and loss of vegetation associated with the Proposed Action. These impacts are inherent of a mining operation like the proposed action, but would be minimized to the extent possible through measures described in the Proposed Action. Therefore, these impacts are not considered substantial and an Environmental Impact Statement is not required.

Unavoidable adverse impacts to soils, vegetation, and water would exist where topsoil is stripped and/or compacted and sedimentation occurs in order to accomplish the Proponent’s objective of exploring for valuable mineral deposits on their mining claims. Unavoidable adverse impacts might occur to wildlife where habitat is destroyed as a result of the excavation of the trenches. These impacts are unavoidable and adverse to the existing conditions; however, none of these impacts would result in undue or unnecessary degradation of public lands as defined in 43 CFR 3809.5

### **3.10. Relationship of Short-Term Uses and Long-Term Productivity (All Resources):**

The CEQ establishes (40 CFR 1502.16) that the balance or trade-off between short-term uses and long-term productivity needs to be defined in relation to the activity in question. The decision maker and members of the public need a clear sense of what they are gaining or losing in both the short and long-term. For the purpose of this analysis, the short-term is considered three months to one year, whereas the long-term is 5+ years.

### **3.10.1. Relationship of Short-Term Uses and Long-Term Productivity Under Alternative A- No Action:**

The short-term continuation of existing impacts to soils, vegetation, and wildlife would be offset by the benefit that the claimant and other members of the public would have through continued casual use exploration and use of the area.

### **3.10.2. Relationship of Short-Term Uses and Long-Term Productivity Under Alternative B- Proposed Action:**

The short-term impacts of soil compaction/mixing, vegetation removal, and temporary wildlife impacts would be offset by the benefit of having these impacts reclaimed and potential hazards such as the previous mine workings and existing disturbances removed.

### **3.11. Irreversible and Irretrievable Commitments of Resources (All):**

Irreversible commitments are those that cannot be reversed, except perhaps in the extreme long term. Examples of irreversible impacts would be species extinction, ore extraction, and logging of an old growth forest.

Irretrievable commitments are those that are lost for a long period of time. Extraction of gold samples would constitute irretrievable impacts because these minerals cannot be renewed in their current location.

Impacts from some actions can be both irreversible and irretrievable for some resources. Management actions most likely to result in irreversible and/or irretrievable impacts include those related to development and surface disturbance such as mineral extraction and energy development.

No resources impacted under either the Proposed Action or No Action Alternatives would be irreversibly or irretrievably committed.

# **Chapter 4. Consultation and Coordination:**

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## 4.1. Persons, Groups, and Agencies Consulted:

**Table 4.1. List of Preparers**

Name	Title	Responsible for the Following Section(s) of this Document
Tom Sunderland	Geologist	Author
Tim Vosburgh	Wildlife Biologist	Consultation on Wildlife
Craig Bromley	Archaeologist	Consultation on Archaeology
Jeremie Artery	Weed Management Specialist	Consultation on Noxious/Invasive species
Jared Oakleaf	Recreation Planner	Consultation on Visual Resources
Ben Kniola	Assistant Field Manager	Reviewer

## 4.2. Summary of Public Participation:

Mr. Wood submitted a Plan of Operations for the Crow Foot project on August 22, 2014. After several revisions the Plan was determined complete; that is, the standards described at the Title 43 Code of Federal Regulations part 3809.401 had been met, and a notice of availability of the Plan was submitted to the local newspapers at that time. The public was allowed 30 days for review and comment on the Plan beginning on September 14, 2014 in the Lander Journal. The public comment period ended on the October 14, 2014 to allow Lander Journal readers adequate time to comment. No comments were received. In addition, this EA would be available on the BLM NEPA Register

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