

Luke Ployhar
Exploration License #00860

Ross Pit Highwall Trench Exploration Project
Phillips County, MT

Environmental Assessment
Draft Published for Public Comment
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**Air, Energy, & Mining Division
Mining Bureau
ENVIRONMENTAL ASSESSMENT**

LICENSEE NAME: Luke Ployhar
DRAFT EA DATE: November 29, 2021
PROJECT: Ross Pit Highwall Trench
LICENSE No: #00860
LOCATION: 47.936765°, -108.565143° **COUNTY:** Phillips
PROPERTY OWNERSHIP: FEDERAL ___ STATE _____ PRIVATE X

COMPLIANCE WITH THE MONTANA ENVIRONMENTAL POLICY ACT

Under the Montana Environmental Policy Act (MEPA), Montana agencies are required to prepare an environmental impact statement for state actions significantly affecting the quality of the human environment. An agency may prepare an environmental assessment to determine the need to prepare an environmental impact statement. This environmental assessment (EA) will evaluate and determine the significance of potential impacts that may result from the proposed and alternative actions. DEQ will then determine the need for preparation of an environmental impact statement based on consideration of the criteria set forth in Administrative Rules of Montana (ARM) 17.4.608.

PROPOSED ACTION

DEQ would issue Metal Mine Reclamation Act (MMRA) mineral Exploration License #00860 (license) to Luke Ployhar (Ployhar) and approve an amendment (AMD1) to the license if DEQ determines that Ployhar has met the criteria set forth in 82-4-332, Montana Code Annotated (MCA).

PURPOSE AND NEED FOR PROPOSED ACTION

DEQ’s purpose and need in conducting the environmental review is to act upon Ployhar’s application for a mineral exploration license. DEQ determined on October 4, 2021 that Luke Ployhar’s License application (the Applicant’s Proposed Action) was complete. Pursuant to 82-4-332 (2), MCA, and ARM 17.24.103, the application was:

1. Submitted in writing;
2. Included a map of sufficient detail to locate the area to be explored, as well as the actual proposed disturbances, and to allow DEQ to adequately determine whether significant environmental problems would be encountered;
3. Stated the type of prospecting and excavation techniques that Ployhar would employ in disturbing the land and including a reclamation plan with sufficient detail to allow DEQ to determine whether the specific reclamation requirements of ARM 17.24.104 through 107 were satisfied.

DEQ is required to issue an exploration license if the applicant meets the following criteria set forth in Section 82-4-332(1), MCA;

1. Pay a fee of \$100 to the department.
2. Agree to reclaim any surface area damaged by the applicant during exploration operations, as may be reasonably required by the department.
3. Not be in default of any other reclamation obligation under the Metal Mine Reclamation Act.

Ployhar's application meets those criteria.

In addition, under ARM 17.24.103, an applicant is required to submit a reclamation performance bond in a form and amount determined by DEQ before an exploration license can be issued.

Table 1. Summary of Applicant's Proposed Action

Summary of Activities in the Applicant's Proposed Action	
General Overview	<p>Luke Ployhar (Ployhar) has proposed to excavate one trench, approximately 35 feet long by 10 feet wide by 25 feet deep to extract a 125-ton bulk sample for metallurgical testing. Ployhar would backfill the trench cut with overburden and waste rock concurrent with excavation further down the trench. Additional waste rock would be placed adjacent to the trench and backfilled at project completion. The trench would be backfilled and graded to match existing topography.</p> <p>No blasting would occur. Ground crew personnel would monitor the wall integrity as the excavation progresses. If the trench walls did not have structural integrity to continue safely, the trench would be limited to 15 feet deep. Ore would be passed to the surface on the west side of the trench, and waste would be placed at the surface to the east of the trench</p> <p>Ployhar would improve approximately 686 feet of an existing bulldozer cut to use as an access road in accordance with ARM 17.24.104. The improved road would not be reclaimed but would be left in place at project completion for use by the private landowner. Excavated ore would be transported via a front-end loader from the trench location to an awaiting haul truck on the main road above the project site. See Figure 3 for site details.</p>
Dimensions and Quantities of Proposed Disturbance	
Trench dimension	1 excavation measuring about 35'x 10'x 25' (0.01 ac.)
New access road	686' x 10' (0.16 ac.)
Waste Rock Stockpile	25' x 25' (0.01 ac.)
Total surface disturbance	0.18 acre
Details of the Applicant's Proposed Action	
Duration and timing	<ul style="list-style-type: none"> - Exploration would commence after issuance of the exploration license. - The project would last for approximately 10 days, weather permitting. - Work would occur during daytime shifts which would generally last from 8:00 a.m. to 6:00 p.m. - Final reclamation would be required to be completed no later than 2 years following conclusion of project but is expected to only take one day.
Equipment	<ul style="list-style-type: none"> - 1 Excavator: Kubota Super Series - 1 Front End Loader: rental of a 1.5- to 2-ton bucket sized loader with rubber tires - 1 ¾ ton pickup with a 6-ton dump box and 20-foot trailer
Location and Analysis Area	<ul style="list-style-type: none"> - The proposed project would be located within the former Zortman Mine site operation boundary, and within the area of the Zortman Mine that has been reclaimed by the State of Montana and the federal Bureau of Land Management (BLM) under the authority of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) - The site would be located approximately 2 miles northwest of the town of Zortman, MT. - The area being analyzed as part of this environmental review includes the immediate project area (Figure 1), as well as immediate downstream water sources and neighboring lands surrounding the analysis area as reasonably appropriate for the impacts being considered.
Personnel Onsite	Onsite personnel would include 2 people: an operator and a laborer.
Structures	There would be no new or temporary structures
Project Water Source	No water use would be anticipated for the proposed project, apart from water for personal consumption that would be purchased offsite.
Supplemental Lighting	The use of supplemental lighting would not be anticipated.
Air Quality	Ployhar would reduce speeds on graveled roads to minimize airborne dust.
Erosion Control and Sediment Transport	<ul style="list-style-type: none"> - Any trees removed would be placed downslope of the new road to minimize erosion. - Where the access road meets the trench location, a shallow diversion trench would be cut to channel road runoff water from entering the trench. - The trench area itself has no vegetative growth and consists of bare rock land cover. - Grass wattles would be placed downhill from the waste pile and straw bales would be placed on the downhill side of the trench. All would be properly secured to the ground per best management practices (BMPs).

Details of Applicant's Proposed Action cont.	
Solid Waste	Any solid waste generated would be removed daily.
Cultural Resources	The applicant has not proposed any actions to reduce impacts to cultural resources.
Hazardous Substances	<ul style="list-style-type: none"> - Up to 20 gallons of diesel and an additional 20 gallons of gasoline fuel would be onsite at any given time, either located in equipment fuel tanks or in several 5-gallon containers brought onsite in the back of the ¾ ton pickup truck. - Equipment petrochemicals, including hydraulic oil, grease gun/tubes, and engine oils would be located onsite. - All extra fluids would be located in clearly marked containers that would be stored in the ¾ ton pickup truck.
Weed Control Plan	Weed growth would be monitored and sprayed as needed.
Reclamation Plan	<ul style="list-style-type: none"> - Ployhar would back fill the trench with waste rock concurrent with trench extension. Additional waste rock would be located adjacent to the trench and would be used as backfill at project completion. The final trench regrading to match existing topography is expected to take 1 additional day at the conclusion of the sample extraction project. - The access road would not be reclaimed at the conclusion of the project but would be left in place for use by the landowner. - Vegetative regrowth at the project site is not expected as the existing surface and final regraded surface is expected to be predominately broken rock.

Overlapping Regulatory Considerations	
<p>The proposed project falls within private land and is also located within the area of the Zortman Mine that has been reclaimed by the State of Montana and BLM under the authority of CERCLA. The proposed project may be subject to additional regulatory oversight and operating conditions at federal, state, county, and/or local levels including, but not limited to, authorizations related to air quality, water quality, and impacts to wildlife and vegetation.</p> <p>This EA will examine the application for an Exploration License submitted to, and determined complete by, DEQ's Field Services and Technology Section (FSTS). The FSTS has determined the application for an Exploration License to be complete pursuant to 82-4-332, MCA. The proposed activities examined in this EA do not necessarily meet operational or regulatory requirements beyond those set forth in the Metal Mine Reclamation Act.</p>	

Figure 1. General project location

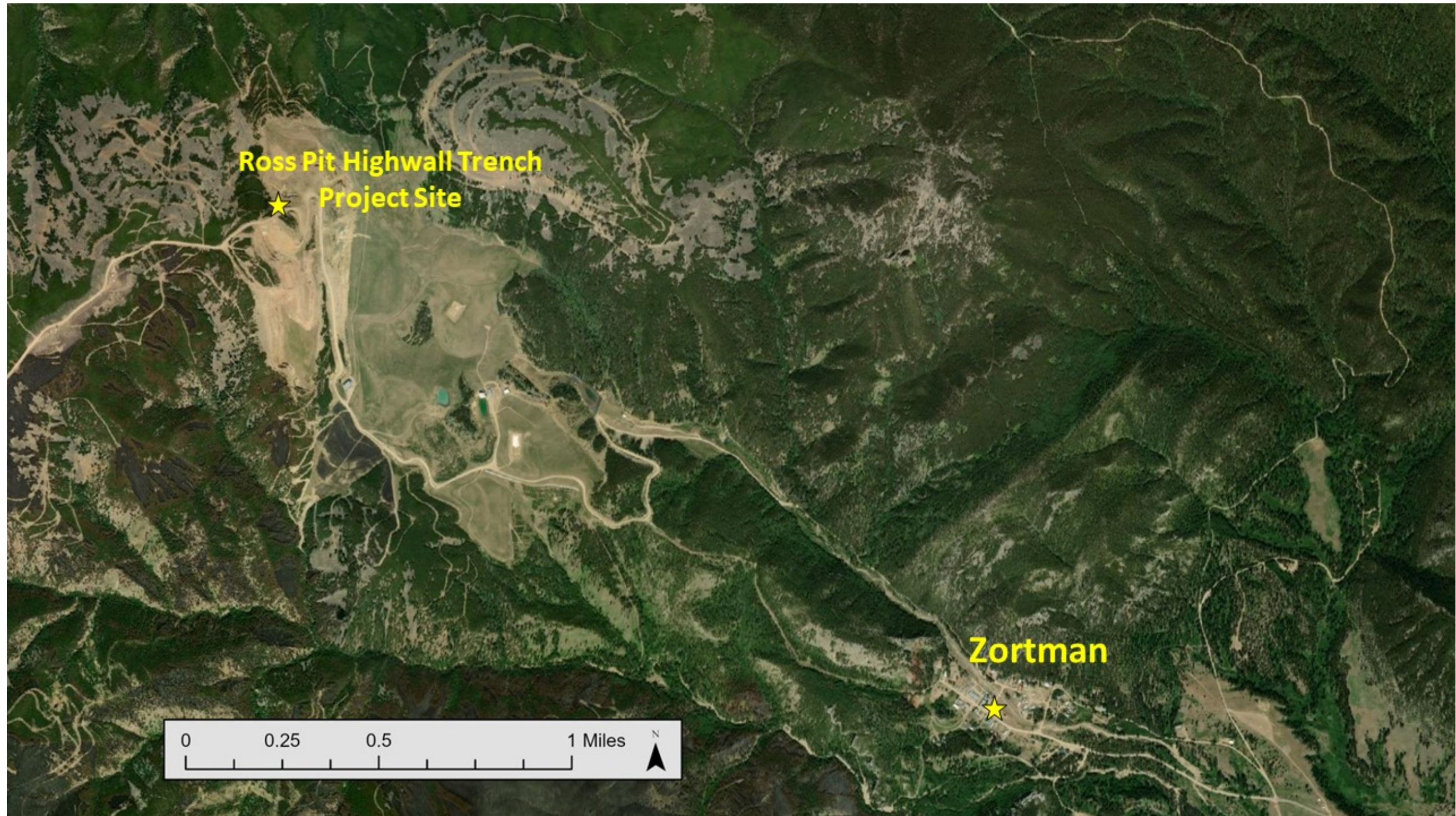


Figure 2. Map view of project details

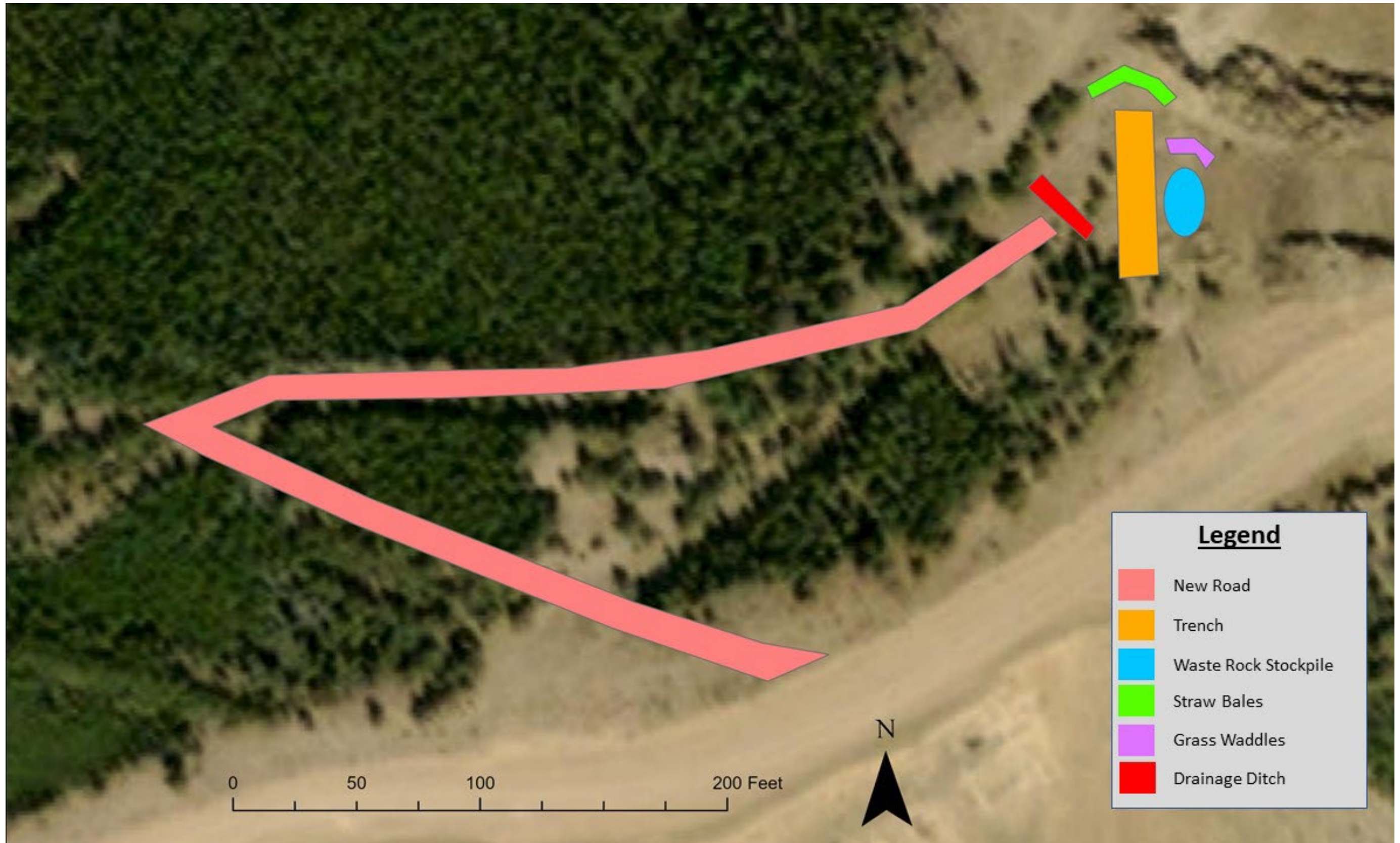


Figure 3. 3-dimensional view of project details



SUMMARY OF POTENTIAL PHYSICAL AND BIOLOGICAL EFFECTS:

The impact analysis will identify and estimate whether the impacts are direct or secondary impacts. Direct impacts occur at the same time and place as the action that causes the impact. Secondary impacts are a further impact to the human environment that may be stimulated, or induced by, or otherwise result from a direct impact of the action ((ARM) 17.4.603(18)). Where impacts would occur, the impacts analysis will also estimate the duration and intensity of the impact. The duration is quantified as follows:

- Short-term: Short-term impacts are defined as those impacts that would not last longer than the life of the project, including final reclamation.
- Long-term: Long-term impacts are impacts that would remain or occur following project completion.

The intensity of the impacts is measured using the following:

- No impact: There would be no change from current conditions.
- Negligible: An adverse or beneficial effect would occur but would be at the lowest levels of detection.
- Minor: The effect would be noticeable but would be relatively small and would not affect the function or integrity of the resource.
- Moderate: The effect would be easily identifiable and would change the function or integrity of the resource.
- Major: The effect would alter the resource.

1. GEOLOGY AND SOIL QUALITY, STABILITY AND MOISTURE

Are soils present, which are fragile, erosive, susceptible to compaction, or unstable? Are there unusual or unstable geologic features? Are there special reclamation considerations?

The area of proposed exploration would be located on a previously mined and exposed rock surface which consists of “Rubble land-Mocmont-Rock outcrop complex” and “Mined land” (Natural Resource Conservation Service, 2021). The applicant’s targeted area for exploration is a mineralized vein on an exposed rock outcrop within the Zortman Mine Complex. The exploration project would excavate a bulk sample of the mineralized vein material. Although the project area was subject to previous mining, the larger mine area has been reclaimed by the State of Montana and the federal Bureau of Land Management (BLM) under the authority of CERCLA.

Ployhar would not salvage topsoil, as the exploration would occur on a rocky surface with little to no topsoil present. Erosion control would be accomplished using a variety of Best Management Practices (BMPs) including but not limited to: haybales, grass wattles, and a drainage ditch where the access road meets the trench location.

Direct Impacts:

No unusual or unstable geologic features are present, and no fragile or particularly erosive or unstable soils are present. Although best management practices would be used, the exploration project could result in erosion of some disturbed soil (Table 3).

Surface soil disturbance could allow for the establishment of weeds. Weed control is a condition of an exploration license and Ployhar would be required to control the spread of noxious weeds.

Exposure of acid-generating materials in the trench area is expected to be minimal. The geochemical

composition of the rock in the trench area is expected to be largely oxide material and similar conditions would be expected beneath the proposed shallow excavation. Oxide material is rock that has already weathered, meaning that sulfide (i.e., acid producing) minerals have already decomposed and would not produce additional acidic or metal-laden run-off. Noxious weeds are further addressed in “Section 4. Vegetation Cover, Quantity and Quality” (Table 3). Impacts to the geology, soil quality, stability and moisture would be short-term and minor and therefore would not be significant (Table 3).

Secondary Impacts:

Based on the definition in ARM 17.4.603(18), secondary impacts are further impacts to the human environment that may be stimulated, or induced by, or otherwise result from a direct impact of the action. No secondary impacts to the geology and soil quality, stability and moisture would be expected.

2. WATER QUALITY, QUANTITY, AND DISTRIBUTION

Are important surface or groundwater resources present? Is there potential for violation of ambient water quality standards, drinking water maximum contaminant levels, or degradation of water quality?

The project area is located near a topographic high point approximately 5,400 feet above sea level and receives a mean annual precipitation of 21.31 inches (StreamStats, 2021). The project area would be located above an intermittent tributary (Glory Hole Gulch) of the headwaters of Lodge Pole Creek. Lodge Pole Creek is a perennial stream and is a tributary to Peoples Creek and eventually the Milk River.

The National Wetland Inventory identified a riparian, lotic, forested wetland located about 0.6 mile to the north of the project area. No wetlands were identified in the immediate project area. No land disturbance or work is proposed within a wetland or riparian areas.

A search of the Groundwater Information Center (GWIC) indicated that 7 groundwater monitoring wells are located within 0.5 mile of the proposed project. The nearest domestic well is located over 1.75 miles southeast of the proposed project area, associated with the community of Zortman.

Direct Impacts:

The proposed project disturbance would not be expected to impact surface or groundwater resources in the vicinity. Excavation and subsequent backfill of the proposed trench would not affect the infiltration into the groundwater system. The existing land surface is covered by coarse talus and rock scree into which all precipitation normally infiltrates. Beneath this layer is low permeability bedrock which would direct this infiltrated water back to the land surface near the crest of the pit highwall. Depth to groundwater near the project site, based upon observations from historic monitoring wells in the area as well as the elevations of springs and drainage adits constructed during the historic mining era (1900-1942) is approximately 700 feet. Stormwater controls (BMPs) would minimize potential impacts to surface water resources and the short duration and small footprint of the project would further assist to minimize potential impacts to water resources. Surface water in Glory Hole Gulch would be the closest surface water to the project area. Glory Hole Gulch is a tributary to Lodgepole Creek and begins about 1,500 feet north of the project site, but there is no path for surficial flow of storm water runoff between the project site and Glory Hole Gulch. If runoff from the project site were to bypass local BMPs, it would flow down a highwall before traversing a vegetated mine pit bench where it would likely infiltrate into the soil. Below this bench is a deep deposit of coarse rock into which any runoff is also expected to infiltrate. Beyond that is another vegetated pit bench on which

a storm water diversion ditch is located that would collect any highwall runoff and direct it away from the Lodge Pole Creek watershed.

Stormwater impacts are expected to be limited to slightly increased turbidity in runoff due to erosion of soil from the project disturbance. The sediment load would be expected to either drop out in local BMPs (in the case of routine storm events) or may be carried further in the case of major runoff events before settling out further down gradient, as described above. Any potential impacts to surface water would be short-term and minor and would not be significant as a result of this project.

Direct impacts to surface or groundwater resulting from this project are not expected.

Secondary Impacts:

Based on the definition in ARM 17.4.603(18), secondary impacts are further impacts to the human environment that may be stimulated, or induced by, or otherwise result from a direct impact of the action. No other secondary impacts to water quality, quantity and distribution are expected.

3. AIR QUALITY:

Will pollutants or particulate be produced? Is the project influenced by air quality regulations or zones (Class I airshed)?

Direct Impacts:

Dust particulate would be produced or become airborne during road construction, bulk sample trenching, and travel along existing roads to and from the project area (Table 3). The excavator, front end loader, and pickup truck would produce some exhaust fumes. The operator would be expected to maintain compliance with Montana's law regarding the need to take reasonable precautions to control airborne particulate matter and has proposed that trucks would travel at reduced ground speeds to limit airborne dust.

The closest class 1 airshed is about 30 miles southeast of the proposed project (UL Bend Wilderness Area). The proposed project would result in minimal dust emissions and is not expected to impact the airshed of the UL Bend Wilderness because of the distance between the proposed project and the wilderness area.

Impacts to air quality would be short-term and minor and, therefore, would not be significant as a result of this project (Table 3).

Secondary Impacts:

Based on the definition in ARM 17.4.603(18), secondary impacts are further impacts to the human environment that may be stimulated, or induced by, or otherwise result from a direct impact of the action. No secondary impacts to air quality are expected.

4. VEGETATION COVER, QUANTITY AND QUALITY:

Will vegetative communities be significantly impacted? Are any rare plants or cover types present?

Land cover in the project area predominately includes cliff, canyon and talus; mining quarry, and conifer-dominated lodgepole pine forest and woodland (MTNHP, 2021).

A search of the Montana Natural Heritage Program (MTNHP) identified potential habitat for 12 vascular plant species of concern (SOC). No vegetative species of concern have been identified in the project area (MTNHP, 2021). The vegetative communities in this project area are predominantly those that have reestablished on the previously mined pit highwalls and disturbed surfaces.

Knapweed, Canada Thistle, and Dalmatian Toadflax are listed noxious weeds that have been identified in the greater project area.

Direct Impacts:

Land disturbance at the site may result in propagation of noxious weeds (Table 3). The majority of surface disturbance related to this project would occur on exposed rock surfaces and would be reclaimed to exposed rock surfaces. Little to no soil exists that could support establishment of vegetation, including noxious weeds. Impacts to vegetative cover, quantity or quality resulting from this project would be short-term and minor and would therefore not be significant (Table 3).

Secondary Impacts:

Based on the definition in ARM 17.4.603(18), secondary impacts are further impacts to the human environment that may be stimulated, or induced by, or otherwise result from a direct impact of the action. If the proposed exploration project is approved, weed control during and after exploration activities would be required. The project area would be subject to any local weed management plans. No other secondary impacts to vegetation cover, quantity and quality are expected.

5. TERRESTRIAL, AVIAN AND AQUATIC LIFE AND HABITATS:

Is there substantial use of the area by important wildlife, birds or fish?

The project is located in the Little Rocky Mountains. Topography within the mountains is rugged, with high outcrops and steep valleys. The area of the proposed project has been previously disturbed by past mining. The surrounding area which has not been disturbed by historical mining includes lodgepole pine forest, ponderosa pine forest, Douglas fir forest, shrubland and outcrop/scree communities. These habitats support well-known species including big game animals, raptors, and bats (EIS 1995). No endangered or threatened species have been identified in the project area. Other common wildlife and birds are migratory in their use of the area (Montana Natural Heritage Program. Environmental Summary Export, Retrieved on 10/14/2021.)

Direct Impacts:

Impacts to terrestrial and avian habitats would potentially include temporary displacement of animals. Habitat found within the project area is common throughout the larger ecosystem (Table 3). Any displaced animals could find other suitable habitat nearby and return to the project area shortly after the project conclusion. Impacts to terrestrial, avian, amphibious, and aquatic life and habitat are short term and minor and would not be significant.

Secondary Impacts:

Based on the definition in ARM 17.4.603(18), secondary impacts are further impacts to the human environment that may be stimulated, or induced by, or otherwise result from a direct impact of the action. No secondary impacts to terrestrial, avian and aquatic life and habitats stimulated or induced by the direct impacts analyzed above would be expected.

6. UNIQUE, ENDANGERED, FRAGILE OR LIMITED ENVIRONMENTAL RESOURCES:

Are any federally listed threatened or endangered species or identified habitat present? Any wetlands? Species of special concern?

A search of the MTNHP identified potential habitat for 85 mammals, reptile, invertebrate, bird, and amphibian Species of Concern (SOC), potential SOC, sensitive, or threatened species in

the habitat of the proposed project. Townsend’s big-eared bat, a native species of concern, was observed about 0.3 mile to the north of the project area in 1996. Habitat for these species is common and not unique to the project area. No wetlands or riparian habitat would be disturbed from the project. The proposed project is similar to previous reclamation activities of short-duration equipment and disturbance which has occurred in this environment for the last 20 years.

Direct Impacts:

Impacts to unique, endangered, fragile or limited environmental resources potentially include temporary displacement of birds or mammals (Table 3). Habitat within the project area is common throughout the larger ecosystem and any animals displaced could find other nearby suitable habitat and return to the project area shortly after the project conclusion. Impacts to unique, endangered, fragile or limited environmental resources would be short-term and minor and would not be significant.

Secondary Impacts:

Based on the definition in ARM 17.4.603(18), secondary impacts are further impacts to the human environment that may be stimulated, or induced by, or otherwise result from a direct impact of the action. No secondary impacts to unique, endangered, fragile, or limited environmental resources that could be stimulated or induced by the direct impacts analyzed above would be expected.

7. HISTORICAL AND ARCHAEOLOGICAL SITES:

Are any historical, archaeological or paleontological resources present?

Information obtained from the Montana Cultural Resource Database under the State Historic Preservation Office (SHPO) indicates that the proposed project area contains both historical and archaeological resources. Sites that are classified as “unresolved” are considered for evaluation purposes, eligible to the National Register of Historic Places (NRHP). There are currently four sites identified within the broad search criteria (Table 2). One is listed as unresolved, two are ineligible, and one listed as eligible to the NRHP.

Table 2. Cultural Resources Identified in the General project Area

Site #	Site Type	Time Period	NR Status
24PH0255	Historic Mining	Historic More Than One Decade	Unresolved
24PH2853	Historic Mining	Historic Period	Ineligible
24PH2854	Historic Mining	Historic Period	Ineligible
24PH3197	Archaeological District	Multiple	Eligible

Site 24PH0255, though it’s NRHP status is unresolved and therefore considered potentially eligible to the NRHP, is located sufficiently far enough away from the project area that there are no concerns for direct or inadvertent impact from project activities. Therefore, the project would have no adverse effect to the site.

Sites 24PH2853 and 24PH2854 are ineligible for the NRHP thus there would be no impacts.

Site 224PH3197 is identified as the Little Rocky Mountains TCP (Traditional Cultural Property) District. The district is composed of numerous tangible historic and archaeological sites and features, as well as several intangible cultural values. The most detailed document that outlines at least some of the specific features and values that contribute to the District was produced by Ethnoscience in 1992

(Deaver and Kooistra 1992).

Direct Impacts:

The proposed construction activities would take place on private land. Construction of the proposed facilities has the potential to impact Site 22PH3197 integrity, affecting NRHP eligibility. It is the Departments understanding that the majority of the project area has already been disturbed, thus the potential for direct physical impacts to any unknown archeological sites is low. Likewise, visual impacts to nearby sites or TCPs would be minimal in regard to the visual integrity of any TCP's. Treatment to avoid or minimize impacts to Site 24PH3197 includes working with the Ft. Belknap Tribal Historic Preservation Office (THPO) to determine if there are any known archeological sites or TCP's that are near or within the proposed project area, and if there are, working with the Tribes to resolve such impacts. Impacts, should they occur, could be long term and significant.

Secondary Impacts:

As defined in ARM 17.4.603(18), secondary impacts are further impacts to the human environment that may be stimulated, or induced by, or otherwise result from a direct impact of the action. Increased access from roads and construction to archaeological sites is considered a secondary impact.

8. AESTHETICS:

Is the project on a prominent topographic feature? Will it be visible from populated or scenic areas? Will there be excessive noise or light?

The proposed exploration activities would occur on private land owned by the applicant. The project area would be located near a topographic high point but there are no populated areas to view the proposed disturbance (Figure 1-2). The proposed project would be within an area where previous mining disturbance has occurred and would be similar in nature to the surrounding mine disturbance. The daily work schedule would consist of work occurring during the day (Table 1) and supplemental lighting would not be expected to be required. Reclamation is proposed to occur immediately following completion of the project and would be expected to be completed within one day of project completion; however, as a condition of an exploration license, reclamation would be required to be completed within two years of the end of the proposed project.

Direct Impacts:

The proposed project could be visible to viewers located at observation points that are unobstructed by topography or forested vegetation via public lands in the area (Table 3). Noise from the project may be heard by receptors located in an area where sound related to the project has not been fully diminished by distance or another sound dampening feature (Table 3). Noise impacts would be short-term due to the proposed project lasting 10 days. Aesthetic impacts from exploration activities would not be excessive to receptors in the area as it would occur on private land where access is restricted to members of the public. Impacts to aesthetics are short-term and low and, therefore, would not be significant (Table 3).

Secondary Impacts:

Based on the definition in ARM 17.4.603(18), secondary impacts are further impacts to the human environment that may be stimulated, or induced by, or otherwise result from a direct impact of the action. No secondary impacts to area aesthetics would be expected as a result of the proposed work.

9. DEMANDS ON ENVIRONMENTAL RESOURCES OF LAND, WATER, AIR OR ENERGY:

Will the project use resources that are limited in the area? Are there other activities nearby that will affect the project?

The proposed project would not use resources that are limited in the surrounding area. The proposed project would not interfere with current monitoring being conducted at the reclaimed Zortman Mine area. Monitoring in the area of the proposed exploration project is limited to scheduled sampling of surface water sites and groundwater monitoring wells. No monitoring wells are located in the immediate area of the project, and the project would not result in restricted access to the monitoring sites.

Direct Impacts:

The proposed project would not use resources that are limited in the surrounding area. Therefore, impacts on the demand on environmental resources of land, water, air or energy are not anticipated as a result of this project.

Secondary Impacts:

Based on the definition in ARM 17.4.603(18), secondary impacts are further impacts to the human environment that may be stimulated or induced by, or otherwise result from a direct impact of the action. No secondary impacts to environmental resources of land, water, air or energy are expected.

10. IMPACTS ON OTHER ENVIRONMENTAL RESOURCES:

Are there other activities nearby that will affect the project?

DEQ searched the following websites or databases for nearby activities that may affect the project:

- Montana Department of Natural Resource and Conservation
- Montana Department of Environmental Quality
- Bureau of Land Management

No other activities were identified.

Direct Impacts:

DEQ did not identify any other nearby activities that may affect the project. Therefore, impacts on other environmental resources are not likely to occur as a result of this project.

Secondary Impacts:

Based on the definition in ARM 17.4.603(18), secondary impacts are further impacts to the human environment that may be stimulated or induced by, or otherwise result from a direct impact of the action. No secondary impacts to other environmental resources are expected as a result of the proposed work.

11. HUMAN HEALTH AND SAFETY:

Will this project add to health and safety risks in the area?

Ground crew personnel would monitor the trench wall integrity as the excavation progresses. If the trench walls did not have structural integrity to continue safely, the trench would be limited to 15 feet deep.

The applicant would be required to adhere to all applicable state and federal safety laws.

Industrial work such as the work proposed by the applicant is inherently dangerous. The Occupational Safety and Health Administration (OSHA) has developed rules and guidelines to reduce the risks associated with this type of labor. Few, if any, members of the public would be in the general project proximity during exploration operations.

Direct Impacts:

Impacts to human health and safety would be short-term and minor and would not be significant as a result of this project.

Secondary Impacts:

Based on the definition in ARM 17.4.603(18), secondary impacts are further impacts to the human environment that may be stimulated or induced by, or otherwise result from a direct impact of the action. No secondary impacts to human health and safety are expected as a result of the proposed work.

12. INDUSTRIAL, COMMERCIAL AND AGRICULTURAL ACTIVITIES AND PRODUCTION:

Will the project add to or alter these activities?

Direct Impacts:

The proposed exploration project would occur in an area that has been previously disturbed by mining activities. The proposed exploration project would not affect any industrial, commercial or agricultural activities in the area. As noted in the cumulative impacts analysis below, this project would add to the impacts of mining in the greater project area. However, all disturbance related to this project would be reclaimed at the conclusion of the project. Reclamation is proposed to occur immediately following completion of the project and would be expected to be completed within one day of project completion; however, as a condition of an exploration license, reclamation would be required to be completed within two years of the end of the proposed project. Impacts on the industrial, commercial, and agricultural activities and production in the area are minor and short-term and are not significant.

Secondary Impacts:

Based on the definition in ARM 17.4.603(18), secondary impacts are further impacts to the human environment that may be stimulated or induced by, or otherwise result from a direct impact of the action. No secondary impacts to industrial, commercial and agricultural activities and production are expected as a result of the proposed work.

13. QUANTITY AND DISTRIBUTION OF EMPLOYMENT:

Will the project create, move or eliminate jobs? If so, estimated number.

The proposed project is estimated to create 2 jobs for the 10-day period of the project.

Direct Impacts:

Significant positive or negative impacts on the quantity and distribution of employment are not likely to result from this project. The project plan calls for limited duration of construction employment at the site. No lasting positive or negative impacts to employment would be expected from this project.

Secondary Impacts:

Based on the definition in ARM 17.4.603(18), secondary impacts are further impacts to the

human environment that may be stimulated, or induced by, or otherwise result from a direct impact of the action. No secondary impacts to quantity and distribution of employment are expected as a result of the proposed work.

14. LOCAL AND STATE TAX BASE AND TAX REVENUES:

Will the project create or eliminate tax revenue?

The proposed project would have a limited increase in tax revenue related to the payroll taxes from the project.

Direct Impacts:

Some positive, yet limited, benefit to the local and state economy could result from this project. However, due to the nature of the exploration project, minimal tax revenue from income or expenses are expected from this project. The impact to local and state tax base and tax revenue are short-term and negligible and would not be significant.

Secondary Impacts:

Based on the definition in ARM 17.4.603(18), secondary impacts are further impacts to the human environment that may be stimulated, or induced by, or otherwise result from a direct impact of the action. Minor beneficial secondary impacts to local and state tax base and tax revenues are expected as a result of the proposed work.

15. DEMAND FOR GOVERNMENT SERVICES:

Will substantial traffic be added to existing roads? Will other services (fire protection, police, schools, etc.) be needed?

The proposed project would add a minimal amount of traffic to the existing roads. The project would need to mobilize and demobilize equipment and personnel to get to the site. The limited traffic would occur during the limited life of the exploration project, including the period of time when disturbances associated with the exploration project are being reclaimed.

Direct Impacts:

Impacts are not expected on the demand for government services. All operations would be subject to local, seasonal restrictions as they apply.

Secondary Impacts:

Based on the definition in ARM 17.4.603(18), secondary impacts are further impacts to the human environment that may be stimulated, or induced by, or otherwise result from a direct impact of the action. No secondary impacts to the demand for government services are expected as a result of the proposed work.

16. LOCALLY ADOPTED ENVIRONMENTAL PLANS AND GOALS:

Are there State, County, City, USFS, BLM, Tribal, etc. zoning or management plans in effect?

The proposed exploration activities would be entirely on private land owned by the applicant. The current reclamation and associated monitoring of the Zortman Mine is managed by DEQ and BLM. The applicant would be required to ensure the proposed project does not interfere with the existing water treatment, reclamation and monitoring activities being conducted by DEQ and BLM at the Zortman Mine, including avoiding any changes to the dimensions of the existing road that would

be used to access the project area.

The proposed project may be subject to additional regulatory oversight and operating conditions at federal, state, county, and/or local levels.

Direct Impacts:

DEQ is not aware of any other locally adopted environmental plans or goals that would be impacted by the proposed project. Therefore, impacts to locally adopted environmental plans and goals are not expected as a result of this project.

Secondary Impacts:

Based on the definition in ARM 17.4.603(18), secondary impacts are further impacts to the human environment that may be stimulated, or induced by, or otherwise result from a direct impact of the action. No secondary impacts to the locally adopted environmental plans and goals are expected as a result of the proposed work.

17. ACCESS TO AND QUALITY OF RECREATIONAL AND WILDERNESS

ACTIVITIES:

Are wilderness or recreational areas nearby or accessed through this tract? Is there recreational potential within the tract?

The proposed exploration activities would occur entirely on private land owned by the applicant, with no access to public recreational opportunities. BLM land is in the vicinity of the proposed project, but public access is not allowed through this area to the BLM land. There are no designated wilderness or recreational areas in the vicinity of the project area.

Direct Impacts:

Impact to the access or quality of recreational and wilderness activities are not expected to result from the project.

Secondary Impacts:

Based on the definition in ARM 17.4.603(18), secondary impacts are further impacts to the human environment that may be stimulated, or induced by, or otherwise result from a direct impact of the action. No secondary impacts to access and quality of recreational and wilderness activities are expected as a result of the proposed work.

18. DENSITY AND DISTRIBUTION OF POPULATION AND HOUSING:

Will the project add to the population and require additional housing?

Zortman is an unincorporated community in Phillips County, Montana. The population was 69 at the 2010 census. As noted above in “Section 13. Quantity and Distribution of Employment”, the project would not be expected to add to or decrease the local population.

Direct Impacts:

Due to the short-term project duration and the temporary nature of the activity, no impact to population density and housing are expected from this project.

Secondary Impacts:

Based on the definition in ARM 17.4.603(18), secondary impacts are further impacts to the human environment that may be stimulated, or induced by, or otherwise result from a direct impact of

the action. No secondary impacts to density and distribution of population and housing are expected as a result of the proposed work.

19. SOCIAL STRUCTURES AND MORES:

Is some disruption of native or traditional lifestyles or communities possible?

Direct Impacts:

The proposed exploration activities would occur entirely on private land owned by the applicant. Due to the low population density of the area and short-term duration of the project, no disruption of native or traditional lifestyles are expected.

Secondary Impacts:

Based on the definition in ARM 17.4.603(18), secondary impacts are further impacts to the human environment that may be stimulated or induced by, or otherwise result from a direct impact of the action. No secondary impacts to social structures and mores are expected as a result of the proposed work.

20. CULTURAL UNIQUENESS AND DIVERSITY:

Will the action cause a shift in some unique quality of the area?

Direct Impacts:

The proposed project is at the former Zortman Mine site and the proposed project would be a similar activity as that of the former mine site and reclamation activities. Due to the short-term project duration and the temporary nature of the activity, no impacts to cultural uniqueness and diversity are expected from this project.

Secondary Impacts:

Based on the definition in ARM 17.4.603(18), secondary impacts are further impacts to the human environment that may be stimulated, or induced by, or otherwise result from a direct impact of the action. No secondary impacts to cultural uniqueness and diversity are expected as a result of the proposed work.

21. PRIVATE PROPERTY IMPACTS:

Are we regulating the use of private property under a regulatory statute adopted pursuant to the police power of the state? (Property management, grants of financial assistance, and the exercise of the power of eminent domain are not within this category.) If not, no further analysis is required. Does the proposed regulatory action restrict the use of the regulated person's private property? If not, no further analysis is required. Does the agency have legal discretion to impose or not impose the proposed restriction or discretion as to how the restriction will be imposed? If not, no further analysis is required. If so, the agency must determine if there are alternatives that would reduce, minimize or eliminate the restriction on the use of private property, and analyze such alternatives.

If DEQ issues Ployhar an exploration license, any conditions of the exploration license are either required to comply with applicable requirements of the Metal Mine Reclamation Act (including administrative rules adopted under the Metal Mine Reclamation Act) or be included in the exploration license with the consent of Ployhar. DEQ is not proposing to include in the exploration license any

conditions that are not required under the Metal Mine Reclamation Act or to which the Ployhar has not consented. Therefore, DEQ is not required to determine whether there are alternatives that would reduce, minimize or eliminate the restriction on the use of private property, and to analyze those alternatives.

22. OTHER APPROPRIATE SOCIAL AND ECONOMIC CIRCUMSTANCES:

Due to the nature of the proposed exploration activities, and the limited project duration, no further direct or secondary impacts are anticipated from this project.

ALTERNATIVES CONSIDERED:

The Proposed Action analyzed in this EA was modified several times by the applicant throughout the application review process. Some changes were made by the applicant after responding to review comments and requests for clarification from DEQ, while other changes were made by the applicant. All changes were incorporated into the applicants plan and is considered the applicants Proposed Action. Some of the major changes made throughout the review process included increasing the length of and re-routing the new access road to decrease the road slope. Ployhar provided DEQ with clarification on several project dimensions and included details on how stormwater would be managed to prevent erosion. The proponent addressed DEQ's concerns raised during the application review process by modifying the proposed action to reduce potential impacts; therefore, development of additional alternatives was not considered necessary.

In addition to the Proposed Action Alternative, DEQ also considered a No Action Alternative. Under the No Action Alternative, DEQ would deny Ployhar's application for an exploration license. Ployhar would not obtain the authority to conduct exploration for minerals on their private land. Ployhar would still be allowed to conduct casual use-level activities but would not be able to dig into the ground with mechanized equipment. The potential impacts that may result under the Proposed Action Alternative would not occur. The No Action Alternative forms the baseline from which the impacts of the proposed action can be measured.

CONSULTATION:

DEQ engaged in internal and external efforts to identify substantive issues and/or concerns related to the proposed project. Internal review of the environmental assessment document was completed by DEQ staff including Whitney Bausch P.G., Jacob Mohrmann P.G., and Craig Jones. External review efforts included queries to the following websites/ databases/ personnel:

- Montana State Historic Preservation Office (SHPO)
- Montana Department of Natural Resource and Conservation (DNRC)
- Montana Department of Environmental Quality (DEQ)
- Montana Department of Transportation (MDT)
- US Geological Society – Stream Stats
- Montana Natural Heritage Program (MTNHP)
- Montana Cadastral Mapping Program
- Montana Groundwater Information Center (GWIC)
- Montana Bureau of Mines and Geology (MBMG)
- United States Department of Interior, Bureau of Land Management (BLM)
- United States Forest Service (USFS)
- United States Environmental Protection Agency (EPA)

PUBLIC COMMENT PERIOD:

Under the Montana Environmental Policy Act, an agency is responsible for providing opportunities for public review consistent with the seriousness and complexity of the environmental issues associated with a proposed action and the level of public interest. Methods of accomplishing public review include publishing a news release or legal notice to announce the availability of a draft EA, summarizing its content and soliciting public comment, holding public meetings or hearings, maintaining mailing lists of persons interested in a particular action or type of action and notifying them of the availability of EAs on such actions, and distributing copies of EAs for review and comment.

DEQ will allow time for the public to comment on the proposed action. Scoping for this proposed action will include a 44-day public comment period. The public will be notified of the opportunity to comment through a DEQ-issued press release and a posting on the DEQ website. DEQ will consider substantive public comments before DEQ issues the final EA.

OTHER GOVERNMENTAL AGENCIES WITH JURISDICTION:

The proposed project would be entirely located on private land owned by the applicant. All applicable state and federal rules must be adhered to, which, at some level, may also include other state, federal, or tribal agency jurisdiction.

CUMULATIVE IMPACTS:

Cumulative impacts are the collective impacts on the human environment within the borders of Montana of the Proposed Action when considered in conjunction with other past and present actions related to the Proposed Action by location and generic type. Related future actions must also be considered when these actions are under concurrent consideration by any state agency through preimpact statement studies, separate impact statement evaluation, or permit processing procedures.

This environmental review analyzes the proposed project submitted by the applicant. The proposed project would occur in an area that has been heavily impacted by previous mining and reclamation activities at the Zortman Mine which have been overseen by the State of Montana and BLM under the authority of CERCLA. Any impacts from the proposed project would be temporary and would be reclaimed at the conclusion of the project pursuant to ARM 17.24.107. Thus, the proposed project would not contribute to the long-term cumulative impacts of mining in the area. DEQ could not identify any related future actions that are under concurrent consideration by any other state agency.

On October 7, 2020, the Bureau of Land Management (BLM) proposed a mineral withdrawal of the public lands in the Zortman-Landusky Mine Reclamation Area from location and entry of new mining claims or sites for an additional 20-year period, subject to valid existing rights. The proposed project is completely on private lands and would not be subject to this proposed withdrawal.

On February 1, 2021, DEQ issued a decision approving an exploration project located approximately 1000 feet to the east of this project's location. Although the project was approved, the applicant has not posted bond, and thus has not been authorized. The project was applied for by Blue Arc, LLC, which is a company owned by this project's applicant. While DEQ understands that Blue Arc, LLC does not have immediate plans to post the bond for that project and then complete the project, if Blue Arc, LLC did post the bond, it would be authorized to complete the project which could occur simultaneously to this project.

DEQ considered all impacts related to this project and secondary impacts that may result. Cumulative impacts related to this project are identified in the Table 3. Cumulative impacts related to this project are not significant.

NEED FOR FURTHER ANALYSIS AND SIGNIFICANCE OF POTENTIAL IMPACTS

When determining whether the preparation of an environmental impact statement is needed, DEQ is required to consider the seven significance criteria set forth in the Administrative Rules of Montana (ARM) 17.4.608, which are as follows:

1. The severity, duration, geographic extent, and frequency of the occurrence of the impact;
2. The probability that the impact will occur if the proposed action occurs; or conversely, reasonable assurance in keeping with the potential severity of an impact that the impact will not occur;
3. Growth-inducing or growth-inhibiting aspects of the impact, including the relationship or contribution of the impact to cumulative impacts;
4. The quantity and quality of each environmental resource or value that would be affected, including the uniqueness and fragility of those resources and values;
5. The importance to the state and to society of each environmental resource or value that would be affected;
6. Any precedent that would be set as a result of an impact of the proposed action that would commit the department to future actions with significant impacts or a decision in principle about such future actions; and
7. Potential conflict with local, state, or federal laws, requirements, or formal plans.

Table 3: Summary of potential impacts that could result from Applicants Proposed Action.

Potential Impact	Affected Resource and Section Reference	Severity ¹ , Extent ² , Duration ³ , Frequency ⁴ , Uniqueness and Fragility (U/F)	Probability ⁵ impact would occur	Cumulative Impacts	Measures to reduce impact as proposed by applicant	Significance (yes/no)
Erosion of disturbed soil	Soil 1.) Geology	S -Low: A maximum of 0.18 acre of ground would be disturbed, and could be susceptible to erosion, except the medium and larger rock would be less likely to have erosive events. E -Small: Total surface disturbance would be 0.18 acre. D -The entire project would occur within 10 days. F -During occasional storm events during the 10 days of the project. U/F -Not unique or particularly fragile.	Possible	Erosion would add to cumulative impacts associated with potential erosion on existing roads, mined surfaces, reclaimed mine surfaces, and other historical disturbances in the proposed project area.	- Any trees removed would be placed downslope of the new road to minimize erosion. - Where the access road meets the trench location a shallow road runoff trench would be cut to channel water away from the trench. - The trench area itself has no vegetative growth and consists of bare rock land cover. - Grass waddles would be placed downhill from the site below the waste pile and straw bales would be placed at the downhill side of the trench and all would be properly secured to the ground per best management practices.	No
Weed propagation associated with surface disturbance	Soil & Vegetation 1.) Geology 4.) Vegetation	S -Low: All disturbed surfaces would be susceptible to weed propagation, except the areas that are rock covered, which is expected to be most of the area. E -small: Total surface disturbance would be less than 0.18 acre. D - The entire project would occur within 10 days. F -After excavation and after reclamation. U/F -Not unique or particularly fragile.	Possible	Weed propagation from this project would add to any other area weeds that already exist within and near the proposed project area.	- Weed control would be a requirement of an exploration license. - The project would be subject to the 2017 Montana Noxious Weed Management Plan and Phillips County Weed Management Plan. - Weed growth, if any, would be monitored and sprayed as needed	No
Dust and equipment exhaust	Air 3.) Air Quality	S -medium: Dust and other particulate would be generated during construction/reclamation and driving on/off site. Engines would produce some exhaust fumes. E -medium: Dust and exhaust fumes would be generated in proximity of moving/working equipment, and from dry exposed soil associated with new access road and trench area. D - The entire project would occur within 10 days. F -Daily: During exploration and reclamation operations. U/F -Not unique or particularly fragile.	Certain	Dust and exhaust would add to the cumulative impacts from other vehicles/engines operating in the area, and to potential natural wildfire smoke moving through the area.	- Ployhar would reduce speeds on graveled roads to minimize airborne dust	No
Displacement of animals	Animals 5.) Terrestrial, avian and aquatic life.	S -low: Only 0.18 acre of ground would be impacted. E -Small: Total surface disturbance would be only 0.18 acre. D - The entire project would occur within 10 days. F -Daily during the 10-day schedule. U/F -Not unique or particularly fragile.	Possible	Displacement of animals as a result of this project would add to the cumulative impacts associated with the adjacent Zortman Mine site.	None proposed	No
Impacts to aesthetics	8.) Aesthetics	S -low: Most disturbed surfaces could be visible to viewers in the vicinity of proposed project on private land. It would not contrast with the previous mine disturbances in the past or near the project. E -low: Total surface disturbance would be 0.18 acres and would be visible to receptors located at observation points that are unobstructed by topography or forested vegetation. Noise may be heard by receptors located in an area where sound related to the project has not been fully diminished by distance or another sound dampening feature. D - The entire project would occur within four months. F -Daily within limited hours of operation: until reclamation is complete U/F -The viewshed would be not diminished; the viewshed is not particularly unique or fragile in the greater project area.	Possible	Impacts to area aesthetics as a result of this project would add to the cumulative impacts associated with the surrounding Zortman Mine site and reclamation surrounding the project area.	None proposed.	No

- Severity describes the density at which the impact may occur. Levels used are low, medium, high.
- Extent describes the land area over which the impact may occur. Levels used are small, medium, and large.
- Duration describes the time period over which the impact may occur. Descriptors used are discrete time increments (day, month, year, and season).
- Frequency describes how often the impact may occur.
- Probability describes how likely it is that the impact may occur without mitigation. Levels used are impossible, unlikely, possible, probable, certain

The severity, duration, geographic extent and frequency of the occurrence of the impacts associated with the proposed exploration activities would be limited. The applicant is proposing to construct an approximately 686 linear feet access road to the trench site. The applicant would excavate a 35feet by 10 feet by 25 feet trench and 125-ton bulk sample for metallurgical testing. The total measurement of potentially disturbed land would be 0.18 acre of surface area. Reclamation is proposed to occur concurrently and immediately following completion of the project and would be expected to be completed within one day of project completion; however, as a condition of an exploration license, reclamation would be required to be completed within two years of the end of the proposed project.

DEQ has not identified any significant impacts associated with the proposed exploration activities for any environmental resource. Issuing Exploration License #00860 does not set any precedent that commits DEQ to future actions with significant impacts or a decision in principle about such future actions. If the applicant submits another exploration license application to conduct additional exploration, or an operating permit application, DEQ is not committed to issuing those authorizations. DEQ would conduct an environmental review for any subsequent authorizations sought by the applicant that require environmental review. DEQ would make a permitting decision based on the criteria set forth in the Metals Mine Reclamation Act. Approving Exploration License #00860 does not set a precedent for DEQ's review of other applications for exploration licenses, including the level of environmental review. The level of environmental review decision is made based on a case-specific consideration of the criteria set forth in ARM 17.4.608.

Finally, DEQ does not believe that the proposed exploration activities by the applicant have any growth-inducing or growth-inhibiting aspects or conflict with any local, state, or federal laws, requirements, or formal plans.

Based on a consideration of the criteria set forth in ARM 17.4.608, the proposed exploration activities are not predicted to significantly impact the quality of the human environment. Therefore, preparation of an environmental assessment is the appropriate level of environmental review under the Montana Environmental Policy Act.

Environmental Assessment and Significance Determination Prepared By:



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