CHECKLIST ENVIRONMENTAL ASSESSMENT

Project Name:	Barrick Gold Exploration Inc. Non-Mechanized Mineral Exploration
Proposed Implementation Date:	~September 2023 to ~Sept. 2026 (for non-mechanized mineral exploration)
Proponent:	Barrick Gold Exploration Inc. 310 South Main, Suite 1150 Salt Lak City, UT 84101
Location:	**Township 6 South, Range 10 West** **Section 16: ALL** 640 acres, more or less (Common Schools Trust) **Township 6 South, Range 11 West** **Section 36: ALL** 640 acres, more or less (Common Schools Trust (CST)) **Township 7 South, Range 10 West** **Section 7: NW¼NE¼, SE¼NW¼** 80 acres, more or less (CST) Beaverhead County

I. TYPE AND PURPOSE OF ACTION

Barrick Gold Exploration Inc., henceforth referred to as the proponent, has applied to the Department of Natural Resources and Conservation (DNRC) for Non-mechanized Land Use Licenses (LULs) in the areas noted above (Figures 1 and 2). The company plans to conduct geologic mapping and to collect rock and soil samples for geochemical multi-element analyses for all precious, platinum group, and base metals, and rare-earth-element-bearing minerals and associated minerals in these areas. Some of these minerals may be included in the U.S. Geological Survey's 2022 critical mineral list. The proponent also anticipates conducting aerial geophysical surveys with manned aircraft that would not be landing on State land. Drones may also be used to collected geophysical information, detailed aerial photos, and topographic information of the licensed areas. Other non-mechanized methods for geophysical data collection may also be used. Exploration goals include characterization of the geology and mineral potential of the area, and identification of possible lode mineral deposits.

For State land and minerals in the Sections noted above, non-mechanized field work is currently proposed to include geologic mapping and collection of soil samples and rock chip samples. Sampling is initially planned on a 500-meter grid. Hand tools such as rock hammers, picks shovels, auger, and/ or other approved tools will be used in sample collection. Soil samples are planned to be collected from holes approximately 1x1x1 foot in size along the grid. The sample holes would be backfilled after sample collection prior to moving on the next sample site. Rock chip samples could also be collected in locations outside the grid should mapping show promising geology that warrants sampling. After collection, the proponent plans to send the samples to a laboratory for geochemical analyses. Depending on results from the analyses, additional soils samples may be collected using a closer spacing on the grid. These would also be analyzed to assist in identifying possible mineralized targets.

The proponent plans to access these tracts by existing roads and two-track trails and on foot. Permission for access may be needed to reach the areas of interest. The Licensee is responsible for

obtaining permission for access where applicable. The primary route into the area is Montana Highway 278 from Dillon, MT.

Section 36, T6S, R11W and the NW¼NE¼, SE¼NW¼ of Section 7, T7S, R11W are surrounded by BLM land. Section 16, T6S, R10W has BLM land on the west and south and Beaverhead-Deerlodge National Forest Land on the north and east. Geological mapping and sample collection would be done on foot from established roads/trails. The LUL's will contain vehicle requirements, including remaining on existing roads/trails.

II. PROJECT DEVELOPMENT

1. PUBLIC INVOLVEMENT, AGENCIES, GROUPS OR INDIVIDUALS CONTACTED:

Provide a brief chronology of the scoping and ongoing involvement for this project.

State of Montana DNRC: TLMD Staff re: Land Use Licenses for non-mechanized mineral exploration
State of Montana DEQ Mining Bureau: Eric Dahlgren, Supervisor, Hard Rock Section Supervisor, Macy Livesay, SMES/Exploration, Field Services and Technology Section
DNRC grazing lessee – Lease #7034 – Section 36 and Section 7 – Harrington Company
DNRC grazing lessee – Lease #2876 – Section 16 – Harrington Company
Bureau of Land Management, Dillon Field Office, Steven Lubinski, Geologist
Montana Sage Grouse Habitat Conservation Program – Therese Hartman, Program Manager

2. OTHER GOVERNMENTAL AGENCIES WITH JURISDICTION, LIST OF PERMITS NEEDED:

Montana Sage Grouse Habitat Conservation Program hosted by Montana Department of Natural Resources and Conservation

3. ALTERNATIVES CONSIDERED:

No Action Alternative: Non-mechanized mineral exploration would not be permitted on three proposed areas for non-mechanized Land Use Licenses. Existing DNRC Trust Land Management activities would continue, including those associated with grazing leases.

Action Alternative: Barrick Gold Exploration Inc. would have the opportunity to conduct non-mechanized mineral exploration for lode deposits of precious and base metals, platinum group minerals, rare-earth-bearing minerals, and associated minerals on their three proposed Land Use Licenses. Existing DNRC Trust Land Management activities would continue, including those associated with grazing leases.

III. IMPACTS ON THE PHYSICAL ENVIRONMENT

- *RESOURCES potentially impacted are listed on the form, followed by common issues that would be considered.*
- *Explain POTENTIAL IMPACTS AND MITIGATIONS following each resource heading.*
- *Enter "NONE" If no impacts are identified or the resource is not present.*

4. GEOLOGY AND SOIL QUALITY, STABILITY AND MOISTURE:
Consider the presence of fragile, compactable or unstable soils. Identify unusual geologic features. Specify any special reclamation considerations. Identify any cumulative impacts to soils.

The three areas of interest locate northwest of Dillon, MT, near the community of Argenta. Section 16 in Township 6 South, Range 10 West (T6S, R10W) occurs approximately 11 to 12 miles away from Dillon and about 1 to 2 miles from Argenta. The closest mine to Section 16 by its surface expression is the Rosemont mine in Section 8. The USGS notes this mine with a shaft symbol about 0.28 miles from Section 16's closest point. Section 36, Township 6 South, Range 11 West (T6S, R11W) is about 12.5 to 13.5 miles away from Dillon and about 1 to 2 miles from Argenta. This Section is located about 0.01 to 1.5 miles from Ermont Mine workings and mill in Section 35. Section 7, Township 7 South, Range 10 West (T7S, R10W) occurs about 11.5 to 12 miles from Dillon and about 2.3 to 2.9 miles from Argenta and about 2.3 to 2.7 miles from the Ermont mill area.

Argenta District
Minor placer activity occurred in the 1860's and increased by the early 1870's both upstream and downstream of Argenta. Renewed interest and activity occurred from 1906 to 1909 and in the early 1930's. (See MT-DEQ reference below).

Hard rock mining took place in the Argenta district beginning in the 1860's. Mines in the area yielded mainly lead and silver with some gold, copper, and zinc. "Although some of the lode mines were in production prior to effective record keeping, it is estimated that the district produced a total of $1,500,000 by 1931 (Shenon 1931; Wolle 1963)." (MT-DEQ Montana Abandoned Mine Lands Historic Hard Rock Mining District Narrative, History for the Argenta District).

Ermont Subdistrict
MT DEQ's information for the Ermont Subdistrict of the Argenta District indicates the first prospecting took place in the mid-1920's and it became known as a site of one of the last gold rushes in the United States in the early 1930's. In 1932 prospectors staked claims around the Ermont mine. The mine purchased 33 of the claims and was sold. Afterward, these lands saw limited gold production from 1932 to 1936. From 1936 to its shutdown due to World War II, the mine and mill had their greatest production. After the war, the mine produced intermittently from 1949-1950 and in 1963. "This one mine produced over one and a quarter ton of gold" (Geach, 1972; Wolle, 1963) in (MT-DEQ Montana Abandoned Mine Lands Historic Hard Rock Mining District Narrative, History for the Ermont Subdistrict of the Argenta District). The ore from the Ermont occurs along the contact between (dolomitic) limestone and porphyritic andesite. In addition to gold, the Ermont complex, the Badger Claim, and the Yellowbird mine also produced silver and copper, along with some lead at the Yellowbird.

Geology
The United State Geological Survey (USGS) Dillon Geologic Map of the Dillon 1 x 2 Degree Quadrangle, Montana and Idaho, (Miscellaneous Geologic Inv. 1803-H, 1 sheet, scale 1:250,000) by Ruppel, Edward, et al. (1993) covers the areas of interest. This map depicts a fault bisecting Section 16, T6S, R10W from northwest to southeast. The edge of a thrust fault occurs close to the southwest corner of Section 36, T6S, R11W.

Ruppel, E., et al. (1993) show Tertiary Bozeman Group (Tbz) sedimentary rocks (tuffaceous sandstone and siltstone) covering parts of Sections 16 and 36. These Sections also contain Snowcrest Range

Group (Lower Penn. And Upper Miss.) and Madison Group (Upper and Lower Miss.), undivided (IPMu). The Snowcrest Range Group includes the Conover Ranch Formation (mudstone and thin interbeds of silty limestone, siltstone and shale, the Lombard Limestone, and the Kibbey Sandstone. The Madison Group consists of limestone, dolomitic limestone, and shale in the Mission Canyon and Lodgepole Limestone. Phosphoria Formation (Permian) and Quadrant Formation (Pennsylvanian and Upper Mississippian) (PMu) are present in Section 16. Rock types in the Phosphoria include chert, partly glauconitic chert, cherty fine-grained sandstone and quartzitic sandstone in the Upper unit and carbonaceous, phosphatic mudstone and shale and phosphate rock, fine grained dolomitic sandstone, siltstone, chert, and cherty limestone with minor interbed of vitreous quartzite. The Quadrant Formation contains quartzitic sandstone and vitreous quartzite with local beds of thin light-to-medium-gray, micritic silty or sandy dolomite or limestone. In some places the lower 15 to 55 feet of the formation may be comprised of dolomite or limestone with thin interbeds of dolomitic or calcareous, fine-grained sandstone.

Cretaceous volcanic rocks (Kvu) occur in the southern part of Section 36, (see description below). Ruppel, E., et al. (1993) also mapped intrusive igneous rocks (Kgd -Cretaceous granodiorite) in the western part of Section 36 and in two small areas of Section 16. Small areas of Mississippian Devonian sedimentary rocks (MDu) are present in the northwest and west central part of Section 36. The Three Forks and Jefferson Formations comprise these sedimentary rocks and include clay-rich siltstone, fine-grained sandstone, underlain by dark gray shale and limestones in the Three Forks and dolomite with minor beds of shale and solution breccia in the Jefferson. Some dolomite solution breccia also occurs with greenish-gray shale near the base of the Three Forks Formation. Lower Pennsylvanian and Upper Mississippian (IPMu) Snowcrest Range and Madison Groups were mapped in the W½ and SE¼ of Section 36.

In Section 7, Ruppel, E., et al. (1993) mapped volcanic rocks (high-potassium dacite and minor andesite and dacite (Kvu)) in the area of State mineral estate. Notes for the map describe this rock unit as an upper lava flow and breccia unit and a lower silicic pyroclastic unit with flow deposits and tuff and in most places, containing zeolites.

The USGS topographic map shows a shaft symbol on the western edge of Section 36, but aerial photography indicates it is in Section 35, possibly associated with the Ermont Mine. Aerial photography also shows a large prospect area with some bulldozed, shallow trenches in the E½SW¼ of Section 16, T6S, R10W and possibly scattered prospects in the W½ of this Section. Rocks at this prospect include: iron oxide-bearing silicified limestone, and limestone metamorphosed into marble.

Steep topography occurs in Section 16, T6S, R10W. Elevation ranges from about 6280 ft to 7199 ft above sea level on Sec 16, T6S, R10W; from about 6000 ft to 6140 ft above sea level on Sec 7, T7S, R10W, and from about 6460 ft to 6510 ft above sea level on Sec 36, T6S, R11W.

Metalliferous mineral exploration has previously taken place on Sections 36 and 16.

Soils

According to the USDA Web Soil Survey, Section 16, T6S, R10W includes soils that developed from weathering and erosion of sedimentary rocks and some metamorphic rocks, colluvium, and alluvium (stream deposits). Parent material, climate, organisms, topography, and time contribute to soil formation. Depending on the area within Section 16, the colluvium primarily originated from quartzite, limestone, dolomite, sandstone, and shale. Most of the soils present are varieties of cobbly

loams, gravelly sandy loam, with some gravel, clay, boulders, and other stony materials also present. These soils are susceptible to erosion increasing on steeper slopes. The soils within Section 16 exhibit a medium risk for soil compaction, moderate to severe risk for soil rutting, and a moderate to high potential for soil restoration.

Section 36, T6S, R11W includes soils that developed from alluvium, slope alluvium and/or colluvium and some colluvium from limestone over residual material weathered from limestone. Soils present in Section 36 include: cobbly sandy loam, sandy clay loam, clay loam, loam, and gravelly and cobbly loams. Other material present includes cobbles, stones and/or boulders. These soils have a low rating for erosion, but erosion does increase on steeper slopes. The soils within Section 36 exhibit a medium risk for soil compaction, slight to moderate risk for soil rutting, and a moderate to high potential for soil restoration.

Section 7, T7S, R10W contains stony soils that are developed from alluvium, slope alluvium and/or colluvium, colluvium over residuum, and some colluvium over residual material weathered from weld tuff, (an extrusive igneous rock). Soils present in the NW¼NE¼ and the SE¼NW¼ include: very gravelly or cobbly: loam, clay loam, sandy loam, sandy clay loam, and very to extremely gravelly ashy loam. These soils have a low rating for erosion, but erosion does increase on steeper slopes. The soils within Section 7 exhibit a medium risk to soil compaction, slight to moderate risk for soil rutting, and a moderate to high potential for soil restoration.

This project would have minimal impacts on soil quality and stability. The project would include foot traffic and hand tools/instruments for sampling. If implemented, aerial geophysical surveys and aerial topographic data and aerial photo collection would not involve ground disturbance. The proponent would be required to stockpile topsoil separately while digging. When pits are refilled, the proponent would replace the subsoil first then all topsoil and sod.

No action alternative: The current geology and soils in the project area would remain undisturbed, as they currently exist. MT-DNRC would lose an opportunity to learn more about the geology and possible mineralization on these tracts of State school trust lands.

Action alternative: The proponent would be able to explore for precious and base metals, platinum group minerals, rare-earth-bearing minerals, and associated minerals through non-mechanized methods, including, but not limited to: geological mapping, sampling of rock outcrops and soils for geochemical analyses, non-mechanized ground geophysical surveys and/or non-ground-disturbing aerial geophysical surveys, and collection of aerial photographic and topographic information. Non-mechanized soil sampling with hand tools would cause minimal soil disturbance scattered locations throughout the areas of interest. The LULs will include a requirement to reclaim any disturbances of soil immediately after samples are taken. Vehicles used to reach the areas will be required to stay on existing roads/trails and will be limited to time periods when the soil moisture content is below 20 percent.

5. WATER QUALITY, QUANTITY AND DISTRIBUTION:
Identify important surface or groundwater resources. Consider the potential for violation of ambient water quality standards, drinking water maximum contaminant levels, or degradation of water quality. Identify cumulative effects to water resources.

Intermittent streams occur through part of the areas of interest. DNRC personnel did not see any surface flow in drainages on August 18, 2023.

Township 6 South, Range 10 West, Section 16: ALL
Part of intermittent Good Friday Gulch has eroded through the S½ of Section 16. A small reach of intermittent Dexter Gulch locates in the SW¼SW¼ of this Section. The upper reaches of several unnamed intermittent drainages are present in the east half of this Section. MT-DNRC's field evaluation file noted that water was not present on this tract.

Township 6 South, Range 11 West, Section 36: ALL
Part of intermittent Ermont Gulch cuts through the SW¼ of Section 36. An unnamed intermittent drainage also cuts through the NW¼ and the central part of the E½ of this Section and intersects Ermont Gulch in Section 6, T7S, R10W.

Township 7 South, Range 10 West, Section 7: NW¼NE¼, SE¼NW¼
Another intermittent tributary to Ermont Gulch cuts through part of the S½ of NW¼NE¼ of Section 7. "Lame Bull Spring also occurs along this reach. The 1965 aerial in DNRC records notes the Lame Bull Pipeline from this spring extends downstream to Ermont Gulch, crosses the gulch, and then the pipeline runs on the gulch's north side below the Ermont Road to Sec. 16, T7S, R10W.

Groundwater
According to Montana's Ground Water Information Center there are no water wells for one mile around T6S, R10W, Section 16. There are two stockwater wells noted on this Section. Static water level was measured at 20 and 28 feet, TD 110 and 140 ft respectively for these wells.

This database indicates there are no water wells for one mile around T6S, R11W, Section 36, or on this Section. No water wells are present for one mile from the NW¼NE¼ and SE¼NW¼ of Section 7, or on these areas.

The USDA Web Soil Survey database indicated the depth to the groundwater table is greater than 80 inches in all three sections.

The USGS topographic map notes an aqueduct that cut the northwest corner of Section 36. This aqueduct terminated near the historic Ermont Mill in Section 35.

The Land Use Licenses will include the following special stipulation that covers springs, wetlands, and streams:

> Soil disturbance within 10 feet of springs, wetlands, and/or the ordinary high-water mark of streams is not permitted without prior written approval by DNRC Minerals Management Bureau.

If soil disturbance within 10 feet of these features is proposed in exploration plans, MMB would review and require appropriate mitigation measures as warranted.

Non-mechanized mineral exploration would not influence groundwater levels. No effects to water resources are anticipated.

No action alternative: The current ground and surface water in the area will not change in abundance or quality unless affected by weather conditions or other activities in the area.

Action alternative: Due to the apparent low subsurface elevation of the ground water table and minimal surface water levels on the proposed LUL areas and the proposed non-mechanized nature of the project, there is no anticipated long-term impacts to the quality of the surface or short- or long-term effects to ground water by implementing the action alternative.

6. AIR QUALITY:
What pollutants or particulate would be produced? Identify air quality regulations or zones (e.g. Class I air shed) the project would influence. Identify cumulative effects to air quality.

A short duration increase in airborne pollutants and particulates could occur from hand digging and vehicular traffic to and from the sites on the existing two track roads/trails. Short term, minor increases in airborne particulates could occur from takeoff and landings of drone aircraft collecting geophysical, topographic and/or aerial photo data. Minimal short-term impacts to air quality are expected.

No action alternative: No impacts expected.

Action alternative: The proponent would be able to map the geology of the proposed LUL areas, collect aerial geophysical, topographic and photo data, and collect rock and soil samples and ground geophysical information. There is a short-term minimal impact to the air quality expected.

7. VEGETATION COVER, QUANTITY AND QUALITY:
What changes would the action cause to vegetative communities? Consider rare plants or cover types that would be affected. Identify cumulative effects to vegetation.

The Sections proposed for non-mechanized exploration contain predominantly Montane Sagebrush Steppe system and Conifer-dominated Forest and Woodland system vegetation communities. These systems are found throughout the landscape of southwestern Montana.

DNRC personnel conducted a field visit to Sections 16, 36, and 7 on August 18, 2023. Personnel noted native vegetation on the sites includes native grasses, shrubs, and sagebrush. MT DNRC field evaluation files indicate the presence of Douglas Fir and juniper trees on Section 16. Personnel did not reach the steeper tree-covered portion of this Section on August 18. A few willow trees are growing in a draw in the SW¼NW¼NE¼ of Section 7.

An inventory of the Montana Natural Heritage Program's Species of Concern database was conducted for the project area. The search yielded no plant species of concern within the project area.

Invasive weed species identified in the area during MT DNRC field evaluations include Hounds tongue and Black Henbane found on Section 7, T7S, R10W. During the August 18, 2023 field visit, Common Mullein was identified on all three referenced sections. Bull thistle rosettes were present in the State portion of Section 7. DNRC personnel also saw scattered knapweed plants on adjacent lands. As part of Land Use Licenses, the Licensee is responsible for the management and mitigation of invasive weeds in the licensed area.

No action alternative: The current vegetation would remain unchanged.

Action alternative: The vegetation in the project area would experience negligible disturbance from the proposed action, including possible minor clearing of vegetation using hand tools. Vehicle use would be restricted to established roads/trails and to times when the soil moisture content is below 20 percent. Manned aerial vehicles used in geophysical mineral exploration will not be permitted to land on State land. No impacts are expected to occur from the proposed activity that would not be addressed by mitigation measures. Mitigation of any impacts on vegetation are as follows: The proponent would be expected to repair any soil damage.

Spread of noxious weeds is a concern and the proponent would be required to monitor exploration sample sites and control noxious weeds during the license period. DNRC will require washing of vehicles prior to entry onto the tracts to help reduce the spread of noxious weeds. DNRC would require vehicles to have adequate fire suppression equipment available and follow guidance from the Dillon Unit, CLO. Water and hand tools will be required to be on hand during activities on the licensed areas. The proponent will be advised to call 911 if a fire starts.

8. TERRESTRIAL, AVIAN AND AQUATIC LIFE AND HABITATS:
Consider substantial habitat values and use of the area by wildlife, birds or fish. Identify cumulative effects to fish and wildlife.

These areas proposed for the LUL's provide habitat for a variety of big game, large and small mammals, raptors, greater sage grouse, and variety of other birds. Wildlife activities, if present on the tract, may experience temporary disruption due to the proposed project, but no more than what is currently occurring from human activity in the area. Minimal impacts are anticipated from non-mechanized exploration. Manned aerial vehicles used in geophysical mineral exploration will not be permitted to land on State land. The proponent anticipates manned aerial flights for geophysical surveys or drone flights to collect geophysical data, aerial photos or topographic information on State and Federal areas would occur outside the March 15 to July 15 sage-grouse restriction timeframe.

Township 6 South, Range 10 West, Section 16: ALL

MT Natural Heritage Program (MT-NHP) information shows no sites directly on Section 16 and one site for Townsend's Big-eared bat within a mile of the tract's closest point. MT-NHP last observed this site in 1997, associated with a historic mining shaft.

Section 16 occurs within both Executive Order Greater Sage Grouse Core and General Habitat areas. Approximately the northeast portion of the NE¼ of the section locates inside the boundary of general habitat. The remainder of Section 16 falls within general core grouse habitat. The closest MT-NHP active lek site (last observed in 2017 with direct evidence of breeding) locates about 3.3 miles from

this tract's closest boundary. A sage grouse Executive Order stipulation will be utilized on the Land Use License for this Section.

MT-NHP data indicates the closest Pygmy Rabbit site about 2.7 miles from the tract's closest boundary. An active burrow of rabbits there was last observed in 1997.

The closest MT-NHP bird site to this tract's closest boundary locates about 1 mile away. This Long-billed curlew site was last observed in 1997 with no evidence of breeding.

Township 6 South, Range 11 West, Section 36: ALL

MT-NHP data notes a Long-eared Myotis (bat) site associated with the Ermont mine, about 0.2 miles from Section 36's closest point. The last observation of this mammal noted by MT-NHP occurred in 1997.

MT-NHP data shows a sage thrasher site on Section 36, last observed in 2005 with indirect or circumstantial evidence of breeding. A Brewer's sparrow site locates about 0.4 miles from the tract's closest point. MT-NHP notes birds were last observed in 2005 with indirect evidence of breeding.

Section 36 occurs within Executive Order Greater Sage Grouse Core Habitat area. Two active leks are located on this Section. The leks were last observed in 2022 and MT-NHP data notes indirect evidence of breeding. MT-NHP data notes two radio telemetry sites for this bird within 0.1 mile from the tract's closest point. The next closest site indicated a bird in flight, no evidence of breeding in 2011. A sage grouse Executive Order stipulation will be utilized on the Land Use License for this Section.

Township 7 South, Range 10 West, Section 7: NW¼NE¼, SE¼NW¼

Section 7 occurs within Executive Order Greater Sage Grouse Core Habitat area. One MT-NHP sage grouse sites for birds in flight, no evidence of breeding, is noted on the State portion of Section 7 with another close to the State ownership boundary. Last observation for these sites occurred in 2010-11. MT-NHP notes a radio-telemetry site on State ownership, and a second on BLM ownership in Section 7, both from 2010. A sage grouse Executive Order stipulation will be utilized on the Land Use License for this Section.

MT-NHP data shows active Pygmy Rabbit sites adjacent to Section 7, last observed in 2004. The closest site to State ownership locates about 0.26 miles away.

The closest MT-NHP site for Brewer's Sparrow and Sage Thrashers locates about 0.5 miles from State ownership in Section 7. These birds were observed in 2012 and the sparrow again in 2014, both with indirect evidence of breeding.

A MT-NHP site for Columbia Plateau Pocket Mouse occurs about 0.6 miles from the State ownership's closest point, last observed in 1961.

Due to minimal water on these three tracts and the limited activity proposed, fish, if present, would not be affected.

No action alternative: The project area would remain undisturbed.

Action alternative: The proponent would be granted permission with conditions to conduct non-mechanized mineral exploration in the proposed LUL areas. Impacts to habitats would be negligible. The proposed exploration would not permanently disrupt wildlife in the area due to its short time frame. Similar habitat and forage can be found throughout the area and could sustain the wildlife species present. A sage grouse Executive Order stipulation will be applied to all three LUL's.

9. UNIQUE, ENDANGERED, FRAGILE OR LIMITED ENVIRONMENTAL RESOURCES:
Consider any federally listed threatened or endangered species or habitat identified in the project area. Determine effects to wetlands. Consider Sensitive Species or Species of special concern. Identify cumulative effects to these species and their habitat.

As noted above, Section 16, T6S, R10W occurs within Executive Order Greater Sage Grouse Core and General Habitat areas. Approximately the half of the NE¼ of Section 16 locates inside the boundary of general habitat. The remainder of Section 16, all of Section 36, T6S, R11W and Section 7, T7S, R10W fall within core sage grouse habitat. A sage grouse Executive Order stipulation will be utilized on the Land Use Licenses.

In addition, a search was conducted using the Montana Natural Heritage Program (MT-NHP) Internet site and GIS information. MT-NHP data shows active Pygmy Rabbit sites adjacent to Section 7, last observed in 2004. The closest site to State ownership locates about 0.26 miles away. Some bat occurrences are associated with mine workings in the area, see discussion above in 8. Terrestrial, Avian, and Aquatic Life and Habitats. Brewer's Sparrow and Sage Thrasher's have previously been observed in the abundant sage brush habitat near Sections 16, 36, and 7 (see above, number 8).

Two small wetlands have been mapped in Section 7. The one by Lame Bull Spring was dry on August 18, 2023. No impact to wetlands is anticipated from the non-mechanized mineral exploration.

The proponent will also be conducting non-mechanized geologic mapping and sampling on their claims on BLM and Forest Service land in the area. They anticipate sampling or aerial data collection on State and Federal areas will occur outside the March 15 to July 15 sage-grouse restriction timeframe.

No action alternative: The project area would not be disturbed, and the species of concern may see little to no change to the current environment.

Action alternative: The proponent would be granted conditioned approval to map the geology of the area, collect rock/soil samples, conduct ground geophysical surveys with handheld instruments, make aerial geophysical surveys, and collect aerial topographic and aerial photographic information. There could be a temporary disruption to species of concern if they are present on the tracts. Sagebrush range lands and scattered mountainous timbered areas occur on the tracts and in the project's vicinity. Animals would utilize surrounding areas during the temporary disturbance with the ability to return to the sites upon project completion and/or reclamation. The short duration and non-mechanized nature of this project should not interfere with wildlife species of concern and their habitat. The proponent would be working through the MT Sage Grouse Habitat Conservation Program per Provision 21, Stipulation 11 on the LUL's.

10. HISTORICAL AND ARCHAEOLOGICAL SITES:
Identify and determine effects to historical, archaeological or paleontological resources.

A Class I (literature review) level review was conducted by the DNRC staff archaeologist for the area of potential effect (APE). This entailed inspection of project maps, DNRC's sites/site leads database, land use records, General Land Office Survey Plats, and control cards. The Class I search results revealed that a few "site leads" pertaining to both historic and precontact cultural resources are in the area of potential effect (APE).

Considering the very limited ground disturbing nature of proposed activities, issuance of Land Use Licenses will have *No Effect* to *Antiquities*. No additional archaeological investigative work will be conducted in response to this proposed development. However, if previously unknown cultural or paleontological materials are identified during project related activities, all work will cease until a professional assessment of such resources can be made.

No action alternative: The project area would remain undisturbed, and the existing ground would remain unchanged.

Action alternative: The proponent would be provided conditioned approval to map the geology of the area, collect rock chip and soil samples for geochemical analyses, conduct ground and aerial geophysical surveys, and collect aerial topographic and aerial photo data. The DNRC staff archaeologist has verbally approved collection of small rock/soil samples from previous mineral exploration areas on the tracts. No effects to cultural, archeological, or paleontological resources are anticipated resulting from the action alternative. Provision 18 of the LUL's covers location of such resources during exploration activities and indicates it is the Licensee's responsibility to cease action at the resource site and immediately call the Department.

11. AESTHETICS:
Determine if the project is located on a prominent topographic feature, or may be visible from populated or scenic areas. What level of noise, light or visual change would be produced? Identify cumulative effects to aesthetics.

Impacts to aesthetics would be minimal during the project. There would be no long-lasting increases to noise, and minimal increase in traffic. Some aerial data collection may be visible from Argenta, MT and to visitors in the vicinity of the area of interest for several days. This data collection could increase noise in the area for a few days should manned aerial vehicles be used. Use of drones would produce some noise but to a lesser degree than manned aircraft. The proponent anticipates that the manned aircraft would fly out of the Dillon, MT airport and would not be landing on State or Federal land.

No action alternative: Aesthetics would remain in their current state.

Action alternative: The proponent would be able to map the geology of the area and collect rock and/or soil samples, and geophysical data on foot after travelling to site via established roads. Aerial geophysical surveys, aerial topographic data and aerial photo collection would likely occur over a short time period outside of the sage grouse restriction timeframe of March 15 to July 15. Minimal disturbance for this exploration would not change the area's aesthetics.

12. DEMANDS ON ENVIRONMENTAL RESOURCES OF LAND, WATER, AIR OR ENERGY:
Determine the amount of limited resources the project would require. Identify other activities nearby that the project would affect. Identify cumulative effects to environmental resources.

The proposed project would have minor, temporary impact on environmental resources.

If soil samples are taken, small sampling holes would be hand dug in various locations in Sections 16, 36, and the SE¼NW¼, and NW¼NE¼ of Section 7 to facilitate collection of the soil for geochemical analyses. The proponent would reclaim all sample hole sites and any soil disturbance created by this project. DNRC's non-mechanized Land Use Licenses will limit the maximum size of the hand-dug sample holes/pits to 4 square feet unless approved by MMB-DNRC in writing. The LULs will require that sample holes should be properly filled with subsoil and topsoil.

No action alternative: The area would not be impacted by non-mechanized mineral exploration.

Action alternative: The proponent would be allowed to use non-mechanized mineral exploration techniques including, but not limited to: geological mapping, aerial and ground geophysical surveys, aerial topographic data collection, aerial photo capture, and rock and soil sampling for geochemical analyses for precious and base metals, platinum group minerals, and rare-earth element-bearing minerals, and associated minerals. This permission is conditioned by requirements in the LUL's. The proposed project would not affect water quality or quantity and no water is required for the samples. Air quality may be temporarily affected by airborne dust generated by short-term vehicle use of existing two-track roads/trails, and by foot traffic and small hand-held equipment used in this project.

13. OTHER ENVIRONMENTAL DOCUMENTS PERTINENT TO THE AREA:
List other studies, plans or projects on this tract. Determine cumulative impacts likely to occur as a result of current private, state or federal actions in the analysis area, and from future proposed state actions in the analysis area that are under MEPA review (scoped) or permitting review by any state agency.

No other state, or federal actions are known for these 3 areas proposed for non-mechanized mineral exploration. The proponent will also be conducting non-mechanized geologic mapping and sampling on their claims on BLM and Forest Service land in the area. BLM considers non-mechanized mineral exploration as casual use. Only minimal impacts would be anticipated.

No action alternative: The State Land proposed for non-mechanized mineral exploration would not be evaluated for precious and base metals, platinum group minerals, or rare-earth-element-bearing minerals. Existing Trust Land Management related activities would continue, including grazing operations.

Action alternative: The project area would be explored for precious and base metals, platinum group minerals, and rare-earth-bearing minerals, and associated minerals. Grazing operations would continue. Any sample holes dug with hand tools would be backfilled with the disturbed topsoil. The proponent has the responsibility to contact the MT Sage Grouse Habitat Conservation Program regarding their exploration plans (see Provision 21, Stipulation 11).

IV. IMPACTS ON THE HUMAN POPULATION

- *RESOURCES potentially impacted are listed on the form, followed by common issues that would be considered.*
- *Explain POTENTIAL IMPACTS AND MITIGATIONS following each resource heading.*
- *Enter "NONE" If no impacts are identified or the resource is not present.*

14. HUMAN HEALTH AND SAFETY:
Identify any health and safety risks posed by the project.

No human and health safety risks were identified related to the proposed project other than the typical occupational hazards that coincide with non-mechanized mineral exploration operations.

No action alternative: No impact.

Action alternative: No impacts expected.

15. INDUSTRIAL, COMMERCIAL AND AGRICULTURE ACTIVITIES AND PRODUCTION:
Identify how the project would add to or alter these activities.

The proposed project may have a short-term, minor effect on grazing activities. The LUL's will have contact and coordination stipulations. Effects on current or future industrial, commercial, and agricultural production activities are dependent on detailed exploration results that are unknown at this point.

No action alternative: No impact.

Action alternative: The action alternative has potential to provide an essential resource to industrial, commercial activities. Non-mechanized mineral exploration provides a starting point for evaluation of possible mineral resources that may/or may not be present.

16. QUANTITY AND DISTRIBUTION OF EMPLOYMENT:
Estimate the number of jobs the project would create, move or eliminate. Identify cumulative effects to the employment market.

No action alternative: No Impact.

Action alternative: No Impacts expected.

17. LOCAL AND STATE TAX BASE AND TAX REVENUES:
Estimate tax revenue the project would create or eliminate. Identify cumulative effects to taxes and revenue.

No action alternative: No Impact.

Action alternative: No Impacts expected.

18. DEMAND FOR GOVERNMENT SERVICES:
Estimate increases in traffic and changes to traffic patterns. What changes would be needed to fire protection, police, schools, etc.? Identify cumulative effects of this and other projects on government services.

No action alternative: No Impact.

Action alternative: No Impacts expected.

19. LOCALLY ADOPTED ENVIRONMENTAL PLANS AND GOALS:
List State, County, City, USFS, BLM, Tribal, and other zoning or management plans, and identify how they would affect this project.

MT-DNRC produced a Habitat Conservation Plan (HCP) for Forest Management Bureau activities in western Montana in 2010. The HCP is meant to "avoid, minimize, and/or mitigate the impacts of incidental take of threatened and endangered species as a result of timber harvest and related activities to the maximum extent practicable." The proposed tracts are not designated HCP tracts.

The Bureau of Land Management (BLM) Dillon Field Office published a "Proposed Dillon Resource Management Plan and Final Environmental Impact Statement" in 2005 and a Record of Decision in 2006. The BLM lands around the State lands proposed for LUL's have not been withdrawn from mineral entry. The BLM recently undertook a 15-year Resource Management Plan Evaluation. They expected to have the Evaluation Report finalized sometime in the summer of 2022. It is not available yet. BLM land is adjacent to State Land in Sections 16, 36, and 7. BLM considers non-mechanized mineral exploration as casual use. There are no other known management plans or zoning plans in the area.

The year 2009 saw completion of the most recent Beaverhead/Deer Lodge National Forest Management Plan. The USFS had to complete a supplemental EIS for this plan in response to a 2015 court order regarding "analysis of snowmobile impacts on big game wildlife" and application of "the minimization criteria in the [2005 Travel Management Rule]." Federal Register September 11, 2015.

No action alternative: No Impact.

Action Alternative: The portion of the Beaverhead/Deer Lodge National Forest adjacent to Section 16 is not part of a mineral withdrawal area. BLM land in the area around Sections 36, 16, and 7 have previously experienced mineral exploration. These areas are not part of a mineral withdrawal area. No impacts are expected. The proponent would be able to conduct non-mechanized mineral exploration on State trust land.

20. ACCESS TO AND QUALITY OF RECREATIONAL AND WILDERNESS ACTIVITIES:
Identify any wilderness or recreational areas nearby or access routes through this tract. Determine the effects of the project on recreational potential within the tract. Identify cumulative effects to recreational and wilderness activities.

No wilderness areas exist on or near the areas of interest. The Farlin Creek Wilderness Study Area locates about 10 miles northwest of the closest tract, Section 36, T6S, R11W. The study area totaled 1,139 acres, with 610 of those acres recommended for wilderness, and 529 acres were not recommended for wilderness. The Henneberry Ridge Wilderness Study Area's closet point to the SE¼ of Section 7, T7S, R10W occurs about 7.8 miles away. No acres in this WSA were recommended for wilderness. Bannack State Park locates about 7.5 miles to the southwest of Section 7.

Highway 278 provides the initial route to reach these areas. No change in access to and quality of recreational and wilderness activities should occur as a result of this project.
No action alternative: No Impact.

Action alternative: No Impacts expected.

21. DENSITY AND DISTRIBUTION OF POPULATION AND HOUSING:
Estimate population changes and additional housing the project would require. Identify cumulative effects to population and housing.

No action alternative: No Impact.

Action alternative: No Impacts expected.

22. SOCIAL STRUCTURES AND MORES:
Identify potential disruption of native or traditional lifestyles or communities.

No action alternative: No Impact.

Action alternative: No Impacts expected.

23. CULTURAL UNIQUENESS AND DIVERSITY:
How would the action affect any unique quality of the area?

No action alternative: No Impact.

Action alternative: No Impacts expected.

24. OTHER APPROPRIATE SOCIAL AND ECONOMIC CIRCUMSTANCES:
Estimate the return to the trust. Include appropriate economic analysis. Identify potential future uses for the analysis area other than existing management. Identify cumulative economic and social effects likely to occur as a result of the proposed action.

No action alternative: Currently the State lands proposed for non-mechanized mineral exploration are being utilized for grazing activities and no change to this activity would occur other than what might be planned by the grazing lessee. The no action alternative could limit future exploration of precious and base metals and platinum group metals, as well as rare-earth-element-bearing minerals on Trust Lands.

Action alternative: The proponent provided a $25 payment for each Land-Use-License application fee. Issuance of non-mechanized Land Use Licenses for Section 16 and 36 would provide an annual rental fee of $1,920 for each section ($3 X 640 =1,920). Licensure of the state's ownership in Section 7 would generate $240 annually ($3 x 80 = $240) for this tract. The 3-year term of these three LUL's would generate $12,240) in rental for the Common Schools Trust.

No cumulative economic and social effects from this non-mechanized exploration are expected.

EA Checklist Prepared By:	**Name:**	Teresa Kinley and	Thomas Palin	**Date:**	9/6/2023
	Title:	Geologist/Hydrologist	Mineral Resource Specialist		

V. FINDING

25. ALTERNATIVE SELECTED:

By constructing this Environmental Assessment, the Department has identified impacts to the environment based on two potential alternatives. The Department has selected the action alternative and will authorize Barrick Gold Exploration Inc. to conduct non-mechanical mineral exploration, including but not limited to: geological mapping, soil and rock sampling for geochemical analyses, aerial geophysical surveys, collection of aerial photos and topographic information by drone, and non-mechanized ground geophysical surveys. The Department believes this alternative can be implemented in a manner that is consistent with the long term sustainable natural resource management of the area and generate revenue for the common school trust.

26. SIGNIFICANCE OF POTENTIAL IMPACTS:

I conclude all identified potential impacts will be mitigated by utilizing the stipulations in the following list and no significant impacts will occur because of implementing the selected alternative.

1. Licensee shall follow all applicable state and federal laws, rules and regulations, including but not limited to those concerning safety, environmental protection, reclamation, drone flight requirements for photography, topographic mapping over the site, manned and unmanned aerial geophysical surveys over the site, and sage grouse requirements.

   Licensee shall submit copies of required permits or pertinent exemptions to the Department's Minerals Management Bureau (MMB).

2. It is the responsibility of the Licensee to acquire permission for access to the licensed state lands/mineral estate.

3. All vehicle traffic must stay on established roads/trails (unless written authorization for off-road travel is proved by the Department). All vehicle traffic will be limited to time periods or conditions when use of the roads/trails will not create ruts, i.e. periods when the soil moisture content is below 20 percent.

   All vehicles must be washed, particularly the undercarriage, to assure removal of dirt, plant material, and seeds prior to entering the tract.

   All vehicles must be equipped with adequate fire suppression equipment including a minimum of a shovel and a fire extinguisher. In addition, call 911 if a wildfire should get started.

   Manned aerial vehicles used in mineral exploration are not permitted to land on State Land.

4. The Licensee has the responsibility to keep themselves, staff, and contractors and their staff apprised of the boundaries of the non-mechanized LUL to assist in documentation of mineral exploration activities within the licensed area.

5. The Licensee will provide MMB with an annual exploration plan covering the licensed area for review and approval prior to beginning non-mechanized exploration each year. The plan should include type of non-mechanized exploration proposed within the licensed area and planned locations of sample sites and potential disturbance areas. Reclamation plans for disturbances should also be included.

6. Soil disturbance within 10 feet of wetlands, springs, and/or the ordinary high-water mark of streams is not allowed without prior written approval by Minerals Management Bureau, Montana Department of Natural Resources and Conservation (MT-DNRC). Panning of sediments is prohibited in streams or springs.

7. Licensee will repair soil damage/disturbance created by the Licensee, employees, contractors and/or subcontractors of the Licensee on the licensed area. The size of hand-dug disturbance is limited to a maximum 2 feet by 2 feet opening, outside the 10-foot buffer zone of streams, springs, wetlands, unless the Licensee receives prior written approval by MMB, MT-DNRC. Topsoil/sod will be stockpiled separately from subsoil for reclamation. Licensee and/or employees/contractors shall fill holes with subsoil before covering with topsoil and sod. All holes must be filled and reclaimed immediately prior to moving on to the next hole. MT-DNRC Dillon Unit will advise the Licensee as to the Unit's requirements regarding reseeding of disturbances.

8. Geologic, geochemical/geophysical information (including but not limited to: detailed sample site locations, areas disturbed by non-mechanized mineral exploration, and sample results for each corresponding sample site, and photographic & topographic drone data (processed)), if collected for the tract) will be provided to Minerals Management Bureau, Forestry and Trust Lands Division MT-DNRC annually with a report on exploration activities. The Licensee shall also concurrently provide GPS, GIS, or other data, detailed maps and/or aerial photos associated with the non-mechanized exploration to MMB. Licensee should advise the department if they consider this information confidential.

9. The Licensee, and employees, including contractors, and/or operators shall comply with any requirements of fire restriction stages unless they obtain an exemption that may be issued by the Dillon Unit Office Manager after field review. Access may be temporarily denied should the fire restrictions rise to the level of closure.

10. To mitigate management conflicts during the term of this license, Licensee must contact and coordinate with DNRC's surface lessee and any future licensee/lessee.

11. This license is located within designated sage grouse general and/or core habitat. Proposed activities are subject to, and shall comply with, all provisions, stipulations, and mitigation requirements of the Montana Sage Grouse Habitat Conservation Strategy, as implemented by Governor's Executive Orders 10-2014, 12-2015, and amendments thereto. Contact the TLMD prior to preparing a project proposal.

12. The Licensee shall contact the Department's Trust Land Management Division, Minerals Management Bureau if any gold, silver, platinum group, and/or REE minerals are encountered on the licensed premises.

13. This license is subject to the requirements or rights of pre-existing rights-of-way/easements and/or agreements.

27. NEED FOR FURTHER ENVIRONMENTAL ANALYSIS:

[ ] EIS	[ ] More Detailed EA	[X] No Further Analysis

EA Checklist Approved By:	**Name:**	Trevor Taylor
	Title:	MMB Bureau Chief
Signature:	Trevor E Taylor	**Date:** 9/6/23

See attached Figure 1: Vicinity Map, and Figure 2: Detail of Sections 16, 36, and 7 on 2019 aerial photography.

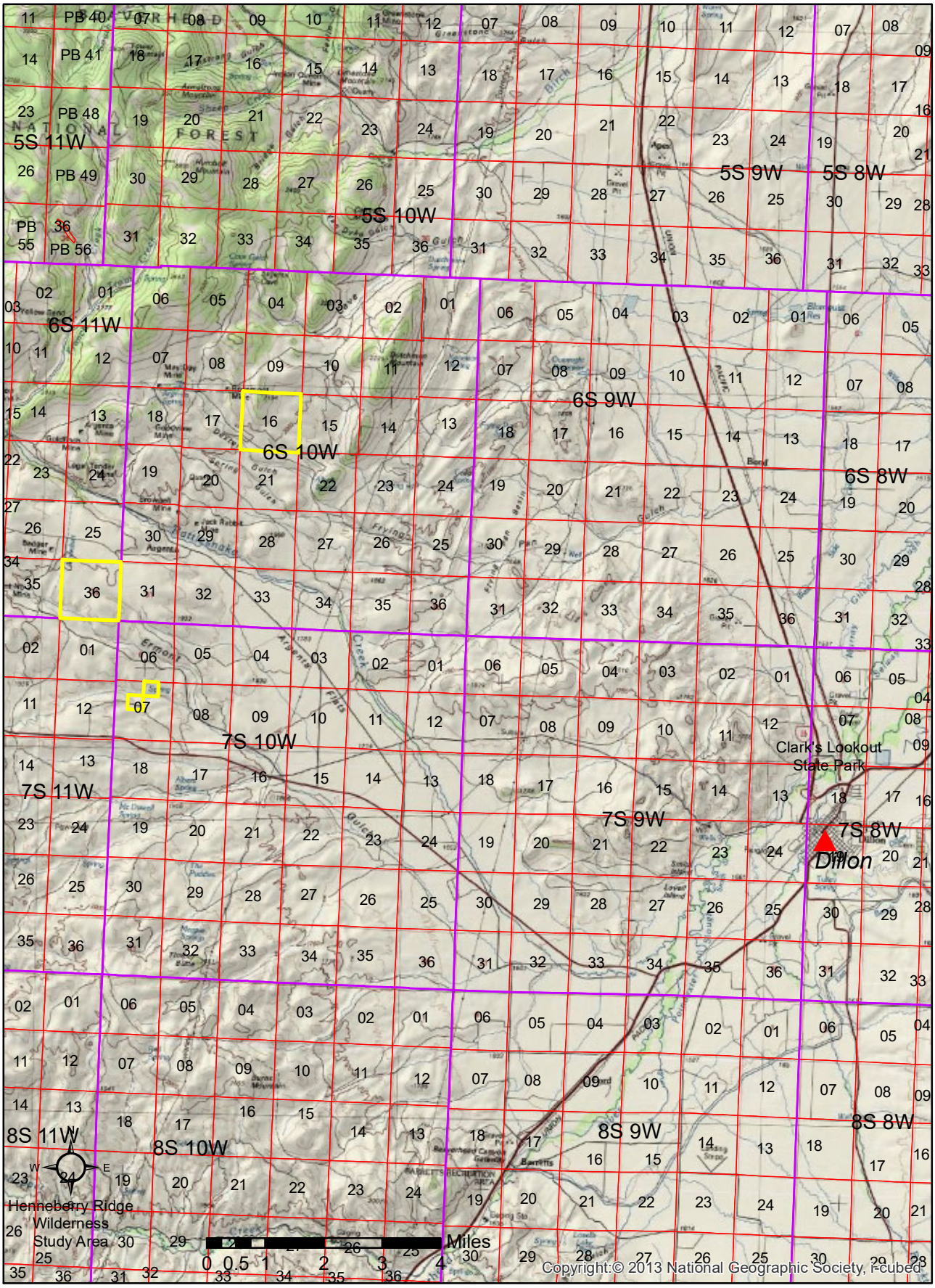

Figure 1: Vicinity Map for Proposed Non-Mechanized Land Use Licenses (yellow outline) in Sec. 16, T6S, R10W, Sec. 36, T6S, R11W, and NW1/4NE1/4, SE1/4NW1/4, Sec. 7, T7S, R10W, PMM on USGS Topographic Maps. Purple lines indicate Montana's Township/Range grid and red lines show Sections and protracted blocks from 2023 CadNSDI info. T. Kinley, MT-DNRC, Aug. 25, 2023.

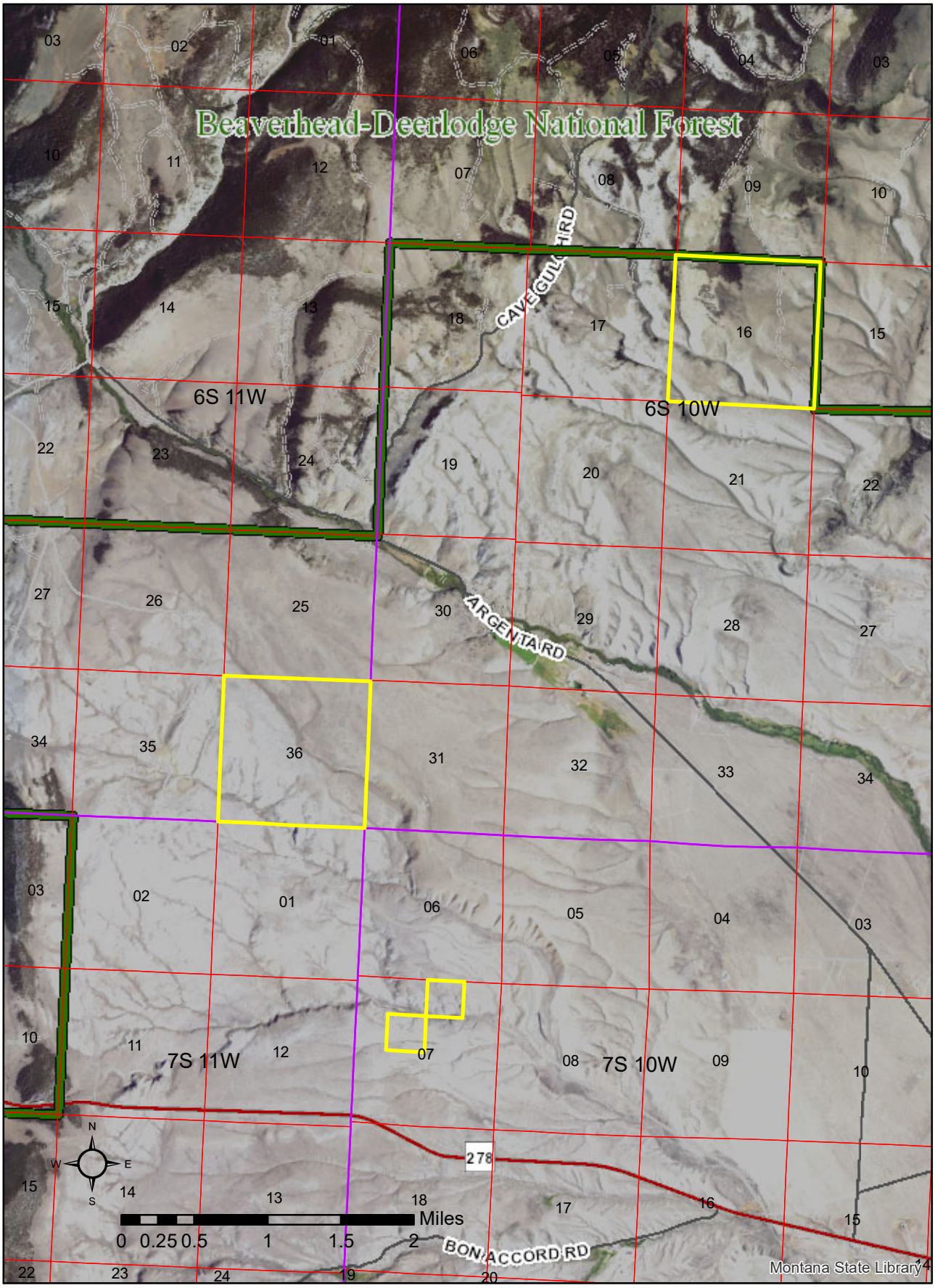

Figure 2: Areas Proposed for Non-Mechanized Land Use Licenses (yellow outline) in Sec. 16, T6S, R10W, Sec. 36, T6S, R11W, and NW1/4NE1/4, SE1/4NW1/4, Sec. 7, T7S, R10W, PMM on 2019 Aerial Photography. Purple lines indicate Montana's Township/Range grid and red lines show Sections from 2023 CadNSDI info. T. Kinley, MT-DNRC, Aug. 25, 2023.