

## CHECKLIST ENVIRONMENTAL ASSESSMENT

<b>Project Name:</b>	Barrick Gold / Golden Sunlight Mine Two-Track Trail Use – <b>Jefferson County</b>
<b>Proposed Implementation Date:</b>	July 30, 2015 through July 30, 2017
<b>Proponent:</b>	Barrick Gold of North America Inc. /Golden Sunlight Mines, Inc. 460 West 50 North, Ste. 500 Salt Lake City, UT 84101 Ph: (775)-748-5568
<b>Location:</b>	SW1/4 of Section 16 – T2N-R3W (Common School Trust)
<b>County:</b>	Jefferson

### I. TYPE AND PURPOSE OF ACTION

The proponent has applied to the DNRC for a Land Use License in order to use an existing two-track trail on the state Section 16 for access to exploration drilling located on BLM land in Sec. 17. The trail is about 1805 feet in length. About four trees with limbs that overhang into the existing trail will need to be partially de-limbed to facilitate passage on the trail (Figure 1).

We anticipate approximately three to four vehicles would be utilizing the trail to reach the exploration site: a pick-up truck, and/or a flatbed truck, a rubber-track drilling vehicle, and a water truck. Two pieces of equipment would use the trail, a D-6 caterpillar for drill pad preparation and rubber tracked backhoe for transporting pallets of core to a staging area on GSM surface south of Section 16 (multiple trips). One round-trip is anticipated for the drill and D-6 per exploration session. The pickup/flatbed would be used to transport personnel across the trail to the exploration site on BLM land. For this year, GSM anticipates 4 shifts with exploration drilling for two holes continuing 24/7 until they are completed. The 4x4 water truck would transport water across the trail for each drill site possibly 2 to 4 times daily. Depending on the results of exploration, the number of vehicles and/or exploration equipment using the trail could increase slightly during the implementation period.

The State land involved includes the two track trail in the SW1/4 of Section 16, T2N-R3W, (Common School Trust) in Jefferson County, Montana.

### II. PROJECT DEVELOPMENT

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

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

On July 21, 2015, Teresa Kinley, MMB Geologist, conducted a field review of the two track trail location and access route with Aaron Norby, contractor for GSM. Scoping was performed by contacting the surface lessee, researching the Montana Natural Heritage Program data, and consulting Patrick Rennie, Montana DNRC Archaeologist.

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

MT Dept. of Environmental Quality – Golden Sunlight Exploration License 00297

**3. ALTERNATIVES CONSIDERED:**

No Action Alternative: The proposed Land Use License would not be granted. Current non-motorized recreational use and grazing leasing would continue.

Action Alternative: The Land Use License would be granted to Barrick Gold/Golden Sunlight Mines, Inc. to use the existing two-track trail in the SW ¼ of Section 16, T2N, R3W and to delimb part of about 4 trees to access their exploration sites on BLM land/mineral estate in Section 17. Current non-motorized recreational use and grazing activities would continue.

**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.*

Section 16

The two-track trail crosses Quaternary (Pleistocene) alluvial fan (Qafo) material located on top of Mississippian /Devonian Three Forks Formation (MDt), Mississippian Lodgepole Limestone (MI) and Devonian Jefferson Formation (Dj). [see Vuke, S., et.al., 2014 GEOLOGIC MAP OF THE BOZEMAN 30' x 60' QUADRANGLE, SOUTHWESTERN MONTANA, Montana Bureau of Mines and Geology, Open File Report 648]. The two-track trail does not cross any unusual geologic features.

The two-track trail crosses the following soil types: gravelly loam, to very gravelly loam which becomes extremely gravelly sandy loam or loamy sand, or unweathered bedrock at depth.

USDA soils information indicates that the footprint of the two track trail is in an area moderately to poorly suited for natural surface roads. The soils where the trail is located are slightly to moderately susceptible to degradation. The rutting hazard is severe in the lower sloped areas of the trail. Vehicles traveling in this area during/after a large precipitation event could degrade the site in some areas. However, soil restoration potential is high.

If any moderate to severely rutted areas in the trail occur due to unforeseen travel during/after major precipitation events, the licensee will be required to smooth these rutted areas to maintain functionality of the two tract trail within its current footprint.

**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.*

An unnamed “intermittent” stream is located about 117 feet downhill from the existing two track trail at its closest point to the trail. No surface water present on 2013 aerial. This drainage appears to only carry surface runoff.

MT-DNRC would not permit transfer of fuels, oil changes, or other work on equipment that may result in spills on the state section. In the event of accidental spills, all spills of hazardous materials (including fuels, lubricants, etc.) over 25 gallons would be reported to MT-DEQ Enforcement Division at the time of occurrence. If smaller spills (1 to 25 gallons) of these materials occur on the trail or adjoining area, the proponent would be required to remove the soil off site and take it to the proper approved depository.

Activity associated with this Land Use License will have minimal effect on water quality, quantity and distribution. Cumulative impacts are not anticipated.

**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 would occur from vehicles during proposed trail use. Minimal short term impacts to air quality are 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 existing two-track trail is located on Montane grasslands and sagebrush steppe. No Species of Concern plants are noted in MT Natural Heritage Program data for Section 16, T2N, R3W. Limber pine, juniper, and big sagebrush are the larger plants noted along the trail. Some vegetative disturbance would occur from the proposed action, i.e delimiting part of about 4 trees. Ground disturbance for the trail would amount to less than ½ acre of affected vegetation that would be exposed to four rubber-tired vehicles, track mounted drill rig and backhoe, and a D6 Caterpillar, for ingress and egress to the exploration sites on the adjoining section. Mitigation of impacts on vegetation are as follows: The proponent will repair any soil damage and seed any disturbed areas with native grass seed. The composition of the mix shall be approved by the Central Land Office prior to seed application.

Noxious weeds are known to exist in the area. The 2013 MT DNRC field evaluation identified spotted knapweed, whitetop, leafy spurge, hounds tongue, and yellow toadflax on the section. Only a thistle rosette was noted in the trail area on July 21, 2015.

The licensee, including employees and contractors, will be required to power wash vehicles and equipment prior to entry on the state section to prevent spread of noxious weeds.

The licensee will be required to monitor sites and control weeds for a period of two years after use of the trail ends.

Stage I Fire Restrictions for Jefferson County are currently in effect. These restrictions include smoking, except within an enclosed area vehicle or building, a developed recreation site or while stopped in an area of at least three feet in diameter that is barren or cleared of all flammable materials.

The licensee, employees, and contractors would be required to comply with any requirements of fire restriction stages unless they obtain an exemption that may be issued by the Helena Unit Office Manager after field review. No use would be allowed should the fire restrictions rise to the level of closure.

For general fire safety in all situations, MT DNRC would also require all vehicles and equipment to be equipped with a fire extinguisher, shovel and/or pulaski and a backpack pump and to meet spark arrestor requirements in Montana Rule 36.10.126 (see attached). In addition, MT DNRC would require a water tank/truck with a minimum capacity of 100 gallons and the ability to pump water to be available, if fire danger reaches high.

Minimal vegetative impacts are expected to occur from the proposed two-track trail use.

**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.*

A variety of big game, small mammals, raptors, and birds use the general area and activities from the proposed trail use could temporarily disrupt wildlife movement and patterns. Due to the limited disturbance off of the existing trail, most nesting and calving activities should not be affected; minimal impacts are anticipated.

**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.*

A search was conducted using the Montana Natural Heritage Program (NHP) database to identify point observations of species of concern (SOC) within one mile of the proposed activity. This search did not identify any SOC sites directly on Section 16 or within one mile of it.

Executive Order (EO) general sage grouse habitat locates about 6 miles to the northwest of the two-track trail area at its closest point. This EO area showed no leks identified. The closest confirmed active sage grouse lek (with 0 male counted) is over 30 miles away.

**10. HISTORICAL AND ARCHAEOLOGICAL SITES:**

*Identify and determine effects to historical, archaeological or paleontological resources.*

Beginning in 1980, the state parcel has been variously inventoried for cultural resources. The entire state parcel was most recently, fully inventoried in 1991. No cultural or paleontologic resources have been identified in the proposed project's area of potential effect. Proposed developments will have No Effect to Antiquities as defined under the State Antiquities Act.

**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.*

The existing two-track trail location is a sparsely populated area about 1.9 miles from Montana Highway 69. The trail location is about 2.9 miles north of I-90 and is not visible to the traffic that utilizes these highways. Due to the short term nature of the activity, minimal aesthetic impacts are expected. Travel on the trail will occur during day and night time hours since exploration drilling is scheduled 24/7 until completed. Some noise is expected from vehicle engines and equipment travel.

**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 use of the existing two-track trail LUL will have a minimal impact on the land (less than 1/2 acre), no water from state land would be used. The trail LUL will temporarily affect the air quality due to airborne dust particles resulting from trail use by vehicles and equipment traveling to and from the exploration site location. No cumulative effects to environmental resources have been identified as a result of use of the two-track trail.

**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 recent environmental documents were found that pertain specifically to Section 16 in T2N-R3W. EA checklists were completed when Montana Dept. of State Lands leased Section 16 for gold and silver in 1993 and for limestone in 1990. Montana Dept. of Natural Resources and Conservation completed an EA checklist for a proposed limestone lease on this section in 2001.

Recent environmental documents related to Golden Sunlight Mine include the following:  
Montana Department of Environmental Quality 2014 (January), Record of Decision for Golden Sunlight Mine, Amendment 015 to Operating Permit No. 00065, Jefferson County, Montana, 16 p.

State of Montana Dept. of Environmental Quality, 2013 (December), Golden Sunlight Mine Amendment 015 To Operating Permit No. 00065 Final Environmental Impact Statement, 267 p.

State of Montana Dept. of Environmental Quality, 2013 (September), Golden Sunlight Mine Amendment 015 To Operating Permit No. 00065 Draft Environmental Impact Statement, 155 p.

If mineral exploration in the adjoining section results in discovery of a mineral deposit, there may be additional activity in the area.

#### 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 as a result of the proposed project other than the typical occupational hazards that coincide with the operation of equipment used for mineral exploration.

#### 15. INDUSTRIAL, COMMERCIAL AND AGRICULTURE ACTIVITIES AND PRODUCTION:

*Identify how the project would add to or alter these activities.*

The proposed use of the two-track trail is not expected to alter current or future industrial, commercial, and agricultural activities and production. The licensee will be required to coordinate with the state's grazing lessee to mitigate potential management conflicts.

#### 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.*

The proposed use of the two-track trail would not create, move, or eliminate jobs.

#### 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.*

None.

#### 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.*

None.

#### 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.*

United States Department of the Interior, Bureau of Land Management, 2008 Proposed Butte Resource Management Plan and Final Environmental Impact Statement, Butte Field Office, Montana

United States Department of the Interior, Bureau of Land Management, 2014, Jefferson County Southeast Planning Area Environmental Assessment; Butte Field Office, Environmental Assessment (DOI-BLM-MT-B070-2013-18-EA) April 2, 2014. Three key issues of concern to BLM in this planning area are:

#### 1) Riparian, Wetland, Aquatic Health and Associated Species

## 2) Upland Health

“The determination of upland health was based on the evaluation of three criteria: degree of soil stability and watershed function, nutrient cycles and energy flows, and available recovery mechanisms.”

## 3) Noxious and Invasive Species

BLM identified Spotted knapweed, hounds tongue, Canada thistle, common mullein, dalmation toadflax, and cheatgrass within the JCSE PA.

Golden Sunlight will be required to control noxious weeds introduced to state surface in the vicinity of the two-track trail. The state would also require power washing of vehicles prior to entry on the state section. No impact is anticipated regarding upland health, riparian, wetland or aquatic health.

### 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.*

Legal access does not exist to the State Section 16 where the two track trail is located. Access to the two-track trail would be through Barrick’s Golden Sunlight mine surface estate to the south-southwest. No wilderness areas exist on or near Section 16.

### 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.*

None.

### 22. SOCIAL STRUCTURES AND MORES:

*Identify potential disruption of native or traditional lifestyles or communities.*

None.

### 23. CULTURAL UNIQUENESS AND DIVERSITY:

*How would the action affect any unique quality of the area?*

None.

### 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.*

The proponent has provided \$25 for a Land Use License application fee, would provide a one-time rental fee of \$150 for access trail to off-site exploration area for the land use license and would pay an additional \$500 reclamation (weed control/revegetation) bond. The existing grazing lease on the State Section listed above currently provides approximately \$1,600 in annual revenue from Section 16 that goes to Common Schools.

<b>EA Checklist Prepared By:</b>	<b>Name:</b> Teresa Kinley	<b>Date:</b> 07-30-2015
	<b>Title:</b> MMB Geologist/Hydrologist	

## V. FINDING

### 25. ALTERNATIVE SELECTED:

After reviewing the Environmental Assessment, I have selected the Action Alternative, to issue a Land Use License. I believe 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 the Land Use License requirements and by utilizing the stipulations listed below. No significant impacts will occur as a result of implementing the selected alternative.

#### Stipulations:

1. All necessary permits will be secured.
2. All vehicles/equipment must be washed, particularly the undercarriage, to assure removal of dirt, plant material, and weed seeds prior to entering the tract.
3. All vehicle/equipment traffic must stay on existing two-track trail. If any moderate to severely rutted areas in the trail occur due to unforeseen travel during/after major precipitation events, the licensee will smooth these rutted areas to maintain functionality of the two tract trail within its current footprint.
4. Licensee will repair any soil damage and seed any disturbed areas with native grass seed per MT DNRC specifications. The composition of the mix shall be approved by the Central Land Office prior to seed application. Licensee will monitor sites and control weeds for a period of two years after last use of the two-track trail.
5. Any tree limbs cleared to facilitate two-track trail use must be removed from state land.
6. Transfer of fuels, lubrication, oil changes, or other work (on vehicles or equipment) that may result in spills are prohibited on the state section. Any accidental spills of hazardous material, (including fuels, lubricants, etc.) over 25 gallons, shall be reported by the company to the Montana DEQ Enforcement Division. If smaller spills (1 to 25 gallons) of these materials occur on the state section, licensee/operator is required to remove the soil off site and take it to the proper approved depository.
7. 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 Helena Unit Office Manager after field review. No use would be allowed should the fire restrictions rise to the level of closure.

The licensee and employees, including contractors, and/or operators shall have a fire extinguisher, shovel and/or pulaski and a backpack pump in vehicles and equipment and shall meet spark arrestor requirements in Montana Rule 36.10.126 (see attached). A water tank/truck with a minimum capacity of 100 gallons and ability to pump water shall be available near the trail if fire hazard reaches "High."

8. Licensee must contact and coordinate with DNRC's surface lessee to mitigate management conflicts.

**27. NEED FOR FURTHER ENVIRONMENTAL ANALYSIS:**

EIS

More Detailed EA

No Further Analysis

<b>EA Checklist Approved By:</b>	<b>Name:</b> Trevor Taylor,	for Monte Mason
	<b>Title:</b> MMB Petroleum Engineer	MMB Bureau Chief
<b>Signature:</b> /s/ Trevor Taylor for Monte Mason		<b>Date:</b> July 30, 2015

**Figure 1: Two-track trail (between black dots) in Sec. 16, T2N, R3W on 2013 aerial photo, proposed for Golden Sunlight LUL. Annotation by T. Kinley, MT-DNRC 2/29/2015**

17

16

JEFFERSON

Trees requiring partial delimiting

20

21





Linda McCulloch  
MONTANA SECRETARY OF STATE

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**Rule: 36.10.126**

Rule Title: EQUIPMENT

Department: [NATURAL RESOURCES AND CONSERVATION, DEPARTMENT OF](#)  
Chapter: [FIRE MANAGEMENT](#)  
Subchapter: [Fire Prevention on Forest Lands](#)

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Latest version of the adopted rule presented in Administrative Rules of Montana (ARM):

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**36.10.126 EQUIPMENT**

(1) All internal combustion engines must be equipped with an approved and effective spark-arresting system, as established in the national wildfire coordinating group's Spark Arrester Guides. Spark-arresting devices must be marked, properly installed, and maintained in accordance with the Guides. The following vehicles are exempt:

(a) automobiles and light trucks of less than 23,000 GVW when all exhaust gases pass through a properly installed and maintained exhaust system, baffle-type muffler, and tailpipe. Vehicles with glass-pack mufflers do not qualify for the exemption;

(b) heavy-duty trucks of 23,000 GVW or greater, with a muffler and vertical stack exhaust system extending above the cab; and

(c) vehicles with other spark-arresting systems providing equal or increased effectiveness. Such vehicles must be inspected and have written authorization from the recognized fire protection agency.

(2) Equipment used for commercial, ranching, or industrial activities must meet the fire extinguisher and tool requirements listed in ARM [36.10.130\(5\)](#).

History: [76-13-109](#), MCA; [IMP, 76-13-125](#), MCA; [NEW](#), 1996 MAR p. 2183, Eff. 6/7/96.

MAR Notices	Effective From	Effective To	History Notes
	6/7/1996	Current	History: <a href="#">76-13-109</a> , MCA; <a href="#">IMP, 76-13-125</a> , MCA; <a href="#">NEW</a> , 1996 MAR p. 2183, Eff. 6/7/96.

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