

## CHECKLIST ENVIRONMENTAL ASSESSMENT

<b>Project Name:</b>	Barretts Minerals, Inc. (LUL 502-19)
<b>Proposed Implementation Date:</b>	September 2019 through September 2029
<b>Proponent:</b>	Barretts Minerals Inc. 8625 Hwy 91 South Dillon, MT 59725 Ph: (406) 683-3327
<b>Location:</b>	SW1/4, Section 36 – T. 8 S., R. 8 W. (Common School Trust)
<b>County:</b>	Beaverhead

### I. TYPE AND PURPOSE OF ACTION

The proponent, Barretts Minerals, Inc., has applied to the Montana Department of Natural Resources and Conservation (DNRC) for a non-mechanized Land Use License (LUL) to explore for talc on the state tract listed above. (See attached site map, Figure 1). Activities would include a topographic and aerial photographic survey by Unmanned Aerial Vehicle (UAV or drone), geologic mapping, and sampling of rocks by hand collection from the surface. Two company people would likely be at the site at any one time.

The proponent plans to accompany their drone contractor [Water and Environmental Technologies, (WET) Butte, MT] in the field for the drone survey. They plan have WET fly the area of interest (about 12 acres) via UAV. The proponent anticipates that flying time would be about ½ hour in ideal conditions, not including setup. The drone is expected to be a vertical take-off, fixed-wing type drone that will fly a grid pattern over the area of interest.

Initial geologic mapping is anticipated to take one to two weeks. It will be performed by the geologist walking the ground while observing rocks and soils with a focus on determining the extent of surface mineralization. Mapping includes taking notes, compass readings, and delineating the various rock types, rock contacts, and faults or other features on a topo map and/or aerial photo with pen and colored pencils. About 12 samples of rocks (likely exposed talc) may be taken by hand from the surface. They will be analyzed for physical characteristics, such as brightness, hardness, and impurities. No digging is planned. The geologist may return to the site after the primary mapping for final checks. The information gathered will be used to determine if the proponent would be interested in pursuing additional (mechanized) exploration.

One company pickup truck would access the site for this project if the proponent obtains access from the private landowner. No off-road/trail vehicular use is planned. DNRC would require the truck to remain on the existing two-track trail.

## 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 24, 2019, Minerals Management Bureau (MMB) Petroleum Engineer, Trevor Taylor, Geologist, Teresa Kinley, and CLO Dillon Unit Manager, Tim Egan conducted a field review of the area of interest and the access route with Mike Cerino from Barretts. Judy Brown, DNRC's surface lessee for the tract, provided temporary access through her private property and guided us along the trail to the site on the state section.

Montana Natural Heritage Program Map Viewer; Whitney Bausch, Hard Rock Mining Bureau, Air, Energy, and Mining Div., MT Department of Environmental Quality (DEQ), Patrick Rennie, Montana DNRC Archaeologist; Montana Sage Grouse Habitat Conservation Program; and DNRC surface lessee: Judy Brown

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

Barretts Minerals, Inc. has an exploration license with Montana DEQ's Hard Rock Mining Program. A DEQ license is not required for non-mechanized exploration activity, per Whitney Bausch.

### 3. ALTERNATIVES CONSIDERED:

No Action Alternative: The proposed Land Use License would not be granted. Current grazing lease activities would continue.

Action Alternative: The Land Use License would be granted to Barretts Minerals, Inc. to conduct non-mechanized exploration for talc, including drone flight for photography and topographic mapping, (DNRC will stipulate that all requirements for drone flight are met), geologic mapping, rock sampling by hand on State land in SW4, Section 36, T. 8 S., R8W. Current grazing lease 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.*

The Geologic map of the Dillon 1 x 2 degree quadrangle, Montana and Idaho (1:250,000) by Ruppel, et al. (1993) shows the general geology of Section 36, T. 8 S., R. 8 W. They mapped Archean marble, quartzofeldspathic gneiss, interlayered schist and gneiss, and amphibolite in this section.

Detailed mapping by Armstrong (1989) indicated the license area's geology consists primarily of Archean metamorphic rocks, including marble, amphibolite (+/- garnet), quartzofeldspathic gneiss,

sillimanite biotite gneiss, and pegmatite to pegmatite gneissy mylonite. Mr. Armstrong also noted a chlorite talc mixture and an area of diabase on his map. Steep topography occurs within the proposed Land Use License area. The proponent wants to conduct detailed geologic mapping and a thorough investigation of the geology and orientation of the rocks on foot and with the assistance of information gathered by UAV (drone) survey noted above. During the July 2019 site visit, we saw a small amount of chlorite/talc in surface subcrop and scattered pieces of talc in some re-contoured former trench areas. Other rocks on site included garnet-bearing quartzofeldspathic gneiss and dolomitic marble.

The Archean marble of this general area is known for talc deposits. Barretts' operating Regal Mine locates in Section 2, T. 8 S., R. 7 W., P.M.M., about 7 miles away from the southwest quarter of Section 36, T. 8 S., R. 8 W. The former Dillon-Smith talc mine on private land and the former Banning-Jones talc mine on state land in SW4, Sec.13. T. 8 S., R. 8 W. locate about 1.9 miles and 2.65 miles from the proposed LUL, respectively.

Previous exploration for talc has occurred in the W1/2 of Section 36, T. 8 S., R. 8 W., P.M.M in the 1940's, late '60's and early 1970's. The MT Dept. of State Lands issued the most recent non-metalliferous leases in 1985. These have been cancelled. Part of the area has been previously disturbed by trenching and was mostly recontoured. The proponent noted approximately 4 historic drill holes (~3-inch diameter) from a previous mineral lessee's exploration. Casing at the surface was not evident. DNRC does not have geologic information or data from the historic exploration. Barretts would not be responsible for reclaiming the historic drill holes.

The State of Montana oil and gas lease issued in 2008 has terminated, so permission requirements associated with this lease have ended. No work was done on this lease.

Soil reports from the USDA indicate that the primary soil type within the target area of exploration and access road is the Cheadle Stoney Rock Outcrop complex which is very susceptible to erosion and degradation upon use. This soil type is moderately resistant to dust propagation, which would help to mitigate impacts to air quality while accessing the site by vehicle. The soil is fairly resistant to rutting and has a moderate restoration potential once degraded.

DNRC would require that all motorized vehicle use occur only during dry soil conditions (soil moisture content below 20%). Surface disturbance of soils would be minimal due to lack of off-trail vehicle use, no digging, and use of only foot traffic for geologic mapping and flying the drone.

**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 drainage cuts the area of interest. DNRC's Agriculture and Grazing Management card has a spring marked in the SE4SW4 that does not appear on the topographic map. We did not identify any surface water in the area of interest during the July 2019 site visit. Exploration is not expected to occur near the drainage bottom. No effects to water quality, quantity and distribution are expected from proposed project activity.

**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, minimal increase in airborne pollutants and particulates may occur from the pickup truck accessing the site. Negligible 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 land cover of the proposed exploration area is located on is Inter-Mountain Basins-Montane Sagebrush Steppe. No ground disturbing activity is proposed. Some very minimal vegetative disturbance would occur from the proposed action. Cheetgrass was noted on July 24, 2019. No impacts are expected to occur from the proposed activity.

DNRC will require vehicles to have adequate fire suppression equipment due to vegetation on the two-track trail. In addition, power washing of vehicles to remove noxious weed seeds prior to entry will be part of this license's stipulations.

**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 songbirds use the general area and activities from the proposed project could temporarily disrupt wildlife movement and patterns. Due to the minimal disturbance proposed for project activities off of existing roads/trail, most nesting and birthing 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.*

The Montana Natural Heritage Program (MT-NHP) map viewer was used to located sensitive species and species of concern located in the vicinity. Montana species of concern located in the vicinity are identified below:

A MT-NHP long-billed curlew site (transient) locates about 2.9 miles from the tract's closest point. It was observed in 2011. A MT-NHP site for sage thrasher and loggerhead shrike (both G4, S3B; BLM: sensitive), locates about 2 miles from the tract's closest point. They were observed in 2010.

The two closest MT-NHP pygmy rabbit [(G4, S3); BLM: sensitive] sites are about 5.3 miles away from the tract's closest point. Active burrows were last observed in 1997.

A MT-NHP ferruginous hawk [(G4, S3B); BLM: sensitive]; site that occurs about 5.2 miles from the tract's closest point was last observed in 2018. The observer noted direct evidence of breeding. The hawk site was adjacent to one of the rabbit sites.

MT-DFWP information shows this tract locates within executive order general sage grouse habitat. The closest confirmed active lek with 3 males counted in 2018 occurs 8 miles away from this tract. The proponent submitted an application and information to the Montana Sage Grouse Habitat Conservation Program. The Program responded with their recommendations on August 26, 2019. The company will be required to pay a mitigation fee to the Program.

The company plans to get the drone survey, geologic mapping, and sampling done in September or October 2019. This period falls outside the sage grouse restriction timeframe.

A MT-NHP search did not locate any species of concern within one mile of the proposed activity.

**10. HISTORICAL AND ARCHAEOLOGICAL SITES:**

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

No ground disturbance is planned for the activity under the proposed land use license. During the site visit on July 24, 2019, field staff did not encounter identifiable historical or archaeological items.

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 revealed that no cultural or paleontological resources have been identified in the APE. Considering the lack of ground disturbance associated with this proposed project, no additional archaeological investigative work will be conducted. 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. The Land Use License form requires the licensee to contact DNRC if they encounter cultural resources.

**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 SW1/4 of Section 36, T. 8 S., R. 8 W. locates off Buster Brown Road in Beaverhead County. Non-mechanized geologic mapping and rock sampling would not be easily visible from either Buster Brown or Blacktail Roads. The closest ranch buildings sit in a draw about a mile away from the SW1/4 of Section 36.

Due to the short-term nature and minimal use of equipment (a pickup truck and small drone) needed for the activity proposed under the LUL, negligible aesthetic impacts are expected. Drone operation will only occur during day-time hours and some minimal noise is expected during flight.

**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 will have a minimal impact on the land and water. Activity may temporarily affect the air quality due to airborne dust particles resulting from a maximum of two vehicles traveling to and from the license area at a time. No cumulative effects to environmental resources have been identified as a result of the proposed non-mechanized land use license.

**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 environmental documents were found that pertain to Section 36 in T. 8 S., R. 8 W.

**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 non-mechanized geologic exploration and drone operations.

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

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

The proposed project is not expected to alter current or future industrial, commercial, and agricultural activities and production.

**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 project would not create, move, or eliminate jobs. The proponent currently has a contractor employed for drone flights at other sites. They plan to use the same contractor for this area.

**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.*

Creation or elimination of tax revenue is not anticipated. The proponent would continue to pay employees for their work, withdraw income tax, and pay other business-related taxes.

**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.*

No known zoning or management plans exist for this area.

**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.*

Feasible legal access does not exist to the state section proposed for exploration. Legal access may be possible through adjacent BLM lands, although would involve miles of cross-country travel in difficult terrain. Judy Brown, the DNRC surface lessee, owns the land surrounding the SW4 of section 36 in which the unimproved road/trail to the section passes. Ms. Brown has requested that Barretts have a license from MT-DNRC Trust Lands prior to continuing negotiations for access to the SW4 of the section. Recreationists would have to obtain landowner permission to cross private land in order to reach this tract unless public access was found several miles away through contiguous BLM surface tracts.

The closest parts of the Blacktail Mountains Wilderness Study Area locate about 4 miles from the SW4 of Section 36. No cumulative effects to recreational or wilderness activities are anticipated.

**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 population changes or requirements for additional housing are expected. No cumulative effects on either population or housing are anticipated.

**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?*

This project is not anticipated to affect any qualities of the area.

**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 non-mechanized exploration Land Use License (LUL) application fee. An annual rental of \$480 dollars will be required for the LUL. If non-mechanized exploration shows promise, the company may pursue a mechanized exploration LUL and/or mineral lease. If exploration proves successful, a mineral lease could potentially generate additional rental and possibly royalty revenue for the Trust.

The existing State grazing lease on Section 36, T. 8 S., R. 8 W. provides approximately \$1,755 in annual revenue (2019) that goes to Common Schools.

<b>EA Checklist Prepared By:</b>	<b>Name:</b> Teresa Kinley and Trevor Taylor	<b>Date:</b> Sept. 12, 2019
	<b>Title:</b> MMB Geologist and Petroleum Engineer	

**V. FINDING**

**25. ALTERNATIVE SELECTED:**

After reviewing the Environmental Assessment, I have selected the Action Alternative, to issue a Land Use License for non-mechanized exploration. 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 utilizing the stipulations listed below and no significant impacts will occur as a result of implementing the selected alternative.

Stipulations:

- 1) Licensee shall be in compliance with 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 and topographic mapping over the site, and sage grouse requirements.

Licensee shall submit copies of required permits or pertinent exemptions to the Department’s Minerals Management Bureau.

- 2) Entrance onto SW4, Section 36, T. 8S., R. 8 W. is prohibited until proof of access is provided to MT-DNRC, Minerals Management Bureau.

- 3) All vehicle traffic must stay on established road/trail and will be limited to time periods or conditions when use of the road/trail 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.

- 4) The boundary for the LUL is delineated on the accompanying Vicinity Map (Figure 1) and in detail on the 2015 aerial photo Site Map (Figure 2). Figure 2 shall be used by proponent and contractors and their staff to keep exploration activities within the licensed area.
- 5) Geologic, geochemical/physical information and photographic & topographic drone data (processed) for the tract will be provided to Minerals Management Bureau, TLMD MT-DNRC annually with a report on exploration activities. The lessee shall also concurrently provide maps depicting sampling locations to MMB. Licensee should advise the department if they consider this information confidential.
- 6) 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.
- 7) Licensee must contact and coordinate with DNRC's surface lessee to mitigate management conflicts (see Section 11).

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

EIS       More Detailed EA       No Further Analysis

<b>EA Checklist Approved By:</b>	<b>Name:</b> Monte Mason
	<b>Title:</b> MMB Bureau Chief
<b>Signature:</b>	<i>Monte &amp; Mason</i> <b>Date:</b> 9/12/19

Attached Maps

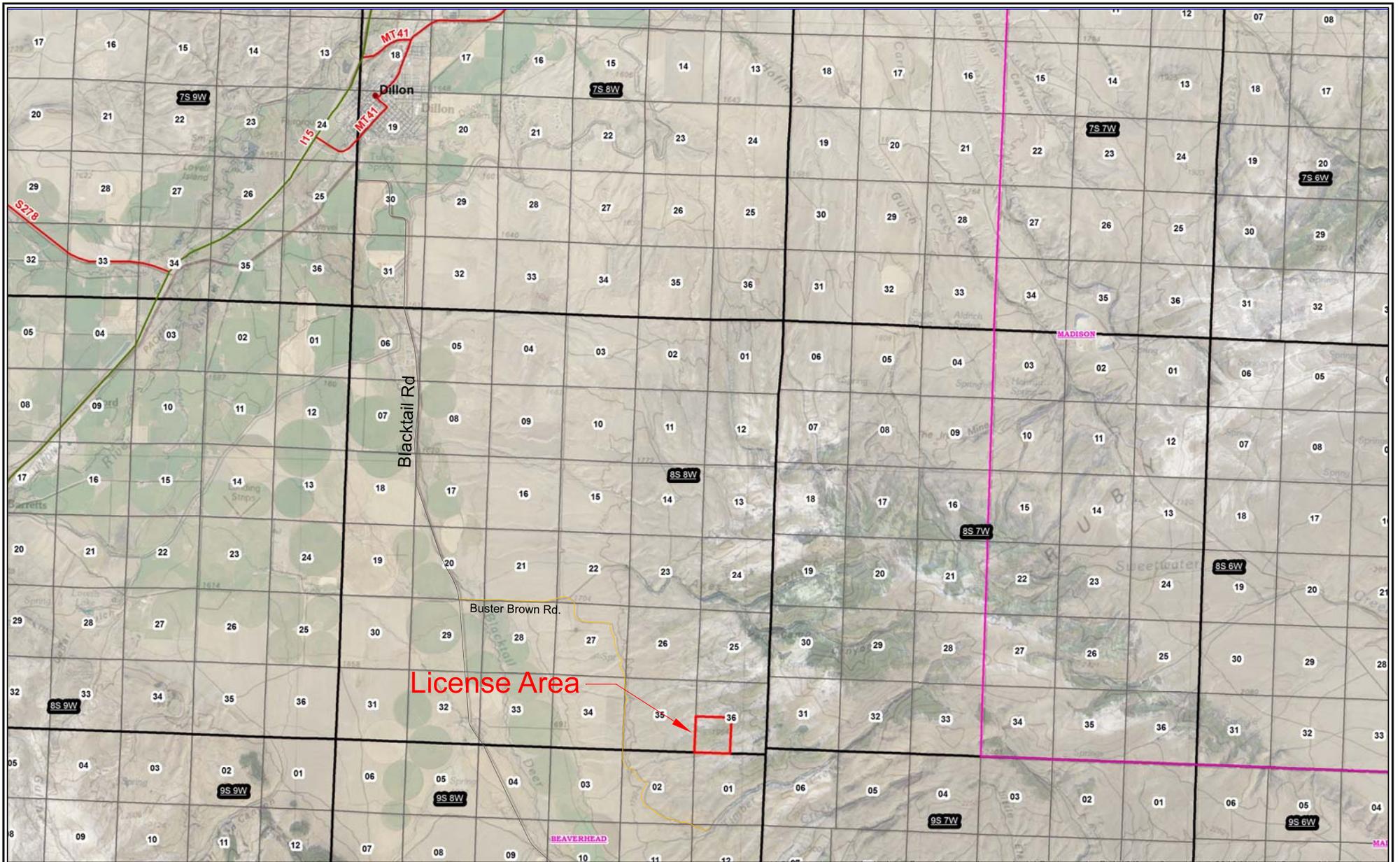
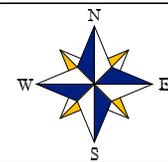


Figure 1 - Vicinity Map



Barretts Minerals Inc. Talc Exploration Project



Map Description: Talc Exploration  
 Location: Beaverhead County 8S-8W-36  
 Date: 9/12/19

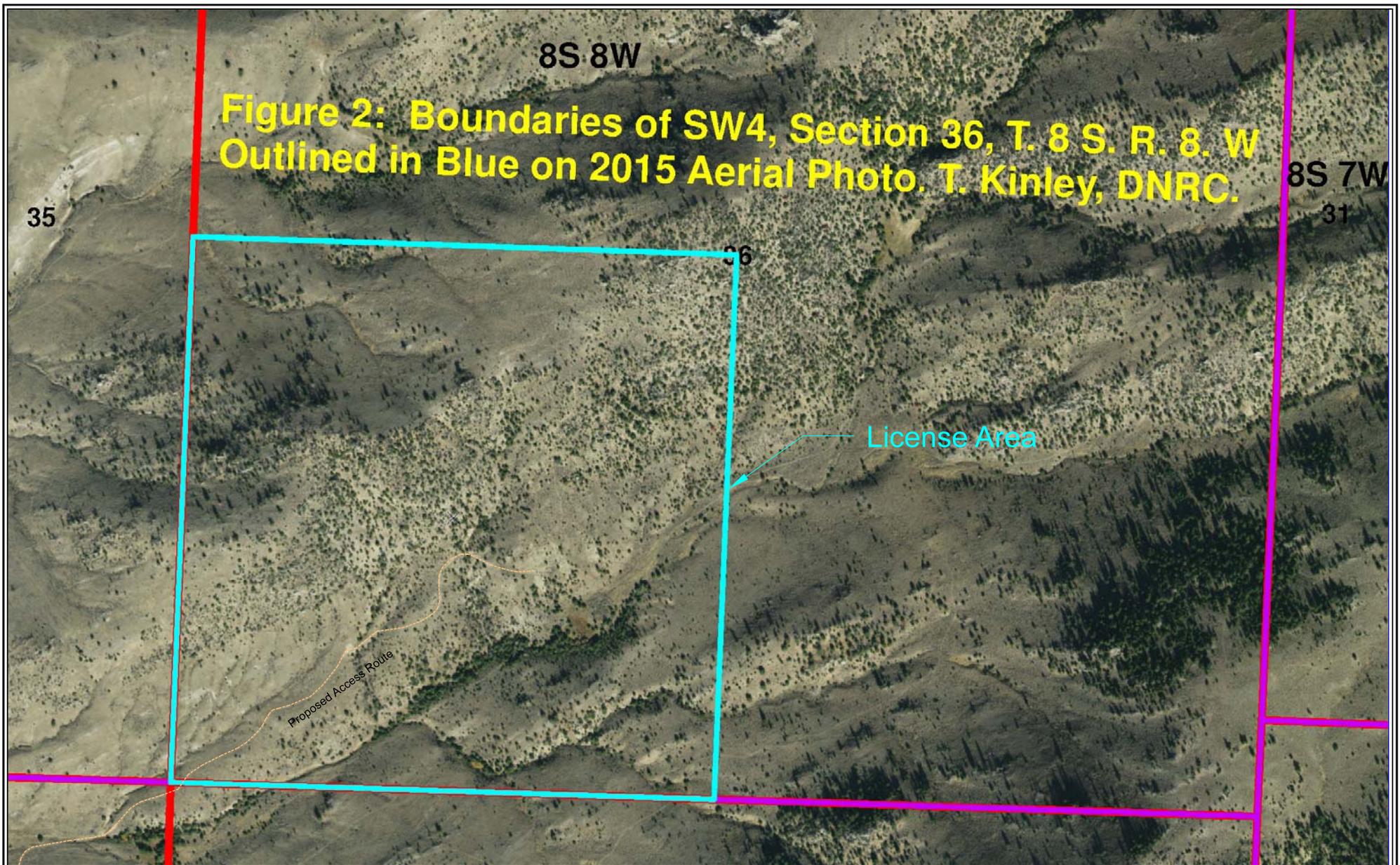
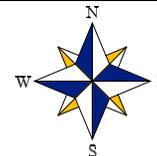


Figure 2 - Site Map



Barretts Minerals Inc. Talc Exploration Project



Map Description: Talc Exploration  
 Location: Beaverhead County 8S-8W-36  
 Date: 9/12/19