CHECKLIST ENVIRONMENTAL ASSESSMENT

Project Name:	Rowdy 3D Seismic
Proposed Implementation Date:	Fall 2026
Proponent:	Paragon Geophysical Services, Inc.
Location:	Surface & Minerals T33N R57E Section 36
County:	Sheridan
Trust:	Common Schools

I. TYPE AND PURPOSE OF ACTION

Paragon Geophysical Services, Inc. (Henceforth referred to as the proponent) has submitted an application to conduct a seismic survey on the Montana Trust Lands. This project would utilize heavy vibration equipment and seismic receiving equipment for the purpose of mapping the subsurface below the tract for oil and gas development potential. The seismic activities will be completed by Paragon Geophysical Services, Inc. The Montana trust lands involved, are part of a much larger seismic project that is being proposed. The proponent is proposing to utilize vibroseis only for the project. Vibroseis is the process of utilizing a large truck that "thumps" the ground and sends vibrations into the subsurface which are then reflected by the geological formations within the subsurface and received by the receiver lines. Upon completion of the project, the receiver lines will be removed, and the project area would return to its pre-existing uses. This evaluation will focus on the impacts to Montana trust lands, but will not evaluate impacts on the adjacent private or federal lands.

II. PROJECT DEVELOPMENT

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

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

The proponent has submitted a seismic application for the project area, along with all other necessary documents. The Glasgow Unit office staff has been informed of the application. The proponent has contacted the Department of Natural Resources and Conservation's (Department) surface lessee and has settled surface damages.

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

Geophysical exploration permit – Sheridan County Clerk and Recorder. This permit must be sent to the Montana Board of Oil and Gas upon approval.

3. ALTERNATIVES CONSIDERED:

No Action Alternative: The permit to conduct a seismic survey on State of Montana Trust Lands would be denied.

Action Alternative: The permit to conduct a seismic survey on State of Montana Trust Lands would be approved.

SUMMARY OF POTENTIAL IMPACTS TO THE PHYSICAL AND HUMAN ENVIRONMENT

The impacts analysis identifies and evaluates direct, secondary, and cumulative impacts.

• Direct impacts: impacts that occur at the same time and place as the action that causes the impact

• Secondary impacts: further impacts to the human environment that may be stimulated, or induced by, or otherwise result from a direct impact of the action.

• Cumulative impacts: collective impacts on the human environment of the proposed action when considered in conjunction with other past and present actions related to the proposed action by location or generic type. Related future actions must also be considered when these actions are under concurrent consideration by any state agency through pre-impact statement studies, separate impact study evaluation, or permit processing procedures.

Where impacts are expected to occur, the impacts analysis estimates the duration and severity of the impact.

<u>The duration of an impact is quantified as follows:</u>
• **Short-term**: impacts that would not last longer than the proposed operation of the site, including reclamation of the site.
• **Long-term**: impacts that would remain or occur following reclamation of the proposed site.

<u>The severity of an impact is measured using the following:</u>
• **No impact**: There would be no change from current conditions.
• **Negligible**: An adverse or beneficial effect would occur but would be at the lowest levels of detection.
• **Minor**: The effect would be noticeable but would be relatively small and would not affect the function or integrity of the resource.
• **Moderate**: The effect would be easily identifiable and would change the function or integrity of the resource.
• **Major**: The effect would alter the resource

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.

Current conditions

Geology: There is no known unique geology within the proposed project area.

Soil: The soil composition of section 36, Township 33N, Range 57E, is comprised of four different soil types. The applicable properties to consider for this project are listed below in Table 1.

Soil Name	Risk of Compaction	Risk of Rutting	Erosion Hazard	Reclamation suitability
Manning Coarse Sandy Loam	Medium	Moderate	Slight	Moderately Suited
Turner Loam	Medium	Severe	Slight	Well Suited
Wabek Gravelly Sandy Loam	High	Severe	Slight	Poorly Suited
Williams Loam	Medium	Severe	Slight	Well suited

Table 1: Soil properties in Section 32, Township 36N, Range 3W.

Alternatives

No Action Alternative: The selection of the no action alternative would not be expected to have any direct, secondary, or cumulative impacts to geology and soil quality, stability and moisture.

Action Alternative:

- Direct Impacts: The selection of the action alternative would not be expected to have any impact upon the geological uniqueness of the area.

  Soils at the project site do have a potential to be impacted by the project. Table 1 shows that the soil in the project area have a severe risk of soil rutting. To mitigate the impacts to soils, if the action alternative is selected, a special stipulation shall be added to the permit which only allows activities when soils are dry. No activity shall be allowed under wet or muddy conditions. This will mitigate the potential for soil rutting and other damage during the project activities. Additionally, the vibroseis trucks are 60,000 lbs. Which can cause strain on soils particularly on slopes. If the action alternative is selected, a special stipulation shall be added to the permit that prohibits the use of vibroseis vehicles on steep slopes.
- Secondary Impacts: No secondary impacts are expected.
- Cumulative Impacts: The proposed action is not expected to have any cumulative impacts on the geology of the proposed area. The soils within the project area may be slightly displaced and

compacted under dry conditions beyond their current state. These impacts would be expected to be negligible overall.
- Duration: The impacts are expected to be short term.

Mitigations

The potential selection of action alternative would include the following stipulations in the seismic permit:
- All activities allowed under this permit are limited to when the ground is dry. No work may be conducted when soils are wet or muddy.
- Vehicles are not allowed to travel on topography steeper than 15% grade.
- Any rutting or damages to soil created by the permittee will be reclaimed immediately upon completion of activity in the area.

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.

Current Conditions

Surface Water:

The project area contains several small wetlands areas.

Ground Water:

The project area contains 13 water wells most of which are utilized by the surface lessee for agricultural water.

Alternatives

No Action Alternative: The no action alternative is not expected to have any direct, secondary, or cumulative impacts to water quality, quantity and distribution.

Action Alternative:
- Direct Impacts: The proposed activity is not expected to impact surface or groundwater quantity, quality or distribution in the project area. Seismic activities do have the ability to impact surface water, but the administrative rules of Montana and the seismic permit require a 300-foot setback from all surface water and water wells. This will mitigate the risk of impacting the water resources within the project area. No blasting activities are proposed for this project, so no impacts to surface or ground water will occur from blasting. The vibrations that penetrate the subsurface are not expected to impact the water wells in the area.
- Secondary Impacts: No secondary impacts expected.
- Cumulative Impacts: No impacts are expected therefore no cumulative impacts are expected.
- Duration: No impacts are expected; therefore, duration is not applicable.

Mitigations

The potential selection of action alternative would include the following stipulation in the seismic permit:

- All equipment utilized in operations must be inspected and maintained daily, prior to activities to ensure it is not leaking fluids, spreading noxious weeds, or creating an undue fire hazard.

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.

Current Conditions

Currently the emission sources in the project area are fugitive dust and exhaust from residential, agricultural and oil and gas activities.

Alternatives

No Action Alternative: The no action alternative would not be expected to have any direct, secondary or cumulative impacts to air quality.

Action Alternative:

- Direct Impacts: An increase in airborne pollutants and particulates would occur during seismic activities from vehicles, and other associated equipment exhaust. An increase in dust particulates may occur due to seismic operations and truck traffic. Short-term, minor impacts to air quality in the project area are expected. It is difficult to estimate how much diesel fuel and gasoline will be utilized during the proposed project. Table 2 shows the estimated emissions in CO2 equivalent (CO2e) based upon several fuel usage scenarios.

Diesel Usage	Gasoline Usage	Total CO2e emissions.
50 gallons	50 gallons	0.98 metric ton
100 gallons	100 gallons	1.96 metric ton
200 gallons	200 gallons	3.92 metric ton

Table 2: Potential emission scenarios based upon fuel usage.

The amount of CO2e emissions expected to be created by the project are non-significant when compared to the total daily emissions of Montana, the Region and the United States. The emission of CO2e from the project activities would be expected to have negligible impacts on air quality.

- Secondary Impacts: Fugitive dust and emissions may travel offsite to the surrounding area. Any particulate or pollutant would dissipate over distance. Secondary impacts are expected to be short-term and negligible.
- Cumulative Impacts: Minor amounts of additional dust beyond what is currently created by agriculture activities would be expected from the action alternative. The emissions created from project activities would be additive to the emissions created around the world.
- Duration: Impacts from dust would be expected to be short-term. Impacts from CO2 emissions would be expected to be long term, but negligible.

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.

Current Conditions

Vegetation within section 36 is mostly crops that have been planted by the Department's surface lessee.

No Action Alternative: The no action alternative would not be expected to have any direct, secondary, or cumulative impacts to vegetation cover, quantity and quality in the project area.

Action Alternative:

- Direct Impacts: Vegetative communities would be impacted in the seismic area. The use of equipment would compact plant communities within the area where vehicles have been driven and vibroseis is completed. Some plants may be damaged by the proposed action. The proponent should coordinate the timing of the project with the surface lessee to ensure it occurs after the harvest season is complete. It is expected that the crops will return to their normal sustenance in the following growing season. No long-term impacts to the vegetation communities are expected. Off-road vehicle travel of any kind presents an opportunity for wildfire to spark and noxious weed spreading. The proponent would be required to keep a fire extinguisher on all equipment and regularly inspect equipment for fire hazards and potential to spread noxious weeds. Overall, the impacts to vegetation on the tract are expected to be minor and localized to areas in which vibroseis is occurring. The proponent shall coordinate with the lessee to spread seed mixture in all areas where vegetation disturbances occur. They shall also monitor and eliminate any noxious weed introduction or growth resulting from the project activities. The mitigations listed above will reduce the impacts to minor.
- Secondary Impacts: No secondary impacts are expected from project activities on trust lands. The entirety of the trust lands tract is within the project area so any impacts to vegetation would be considered direct impacts.
- Cumulative Impacts: The disturbance of vegetation would be additive to any current disturbances. The propagation of weeds may occur without proper mitigation. The mitigations listed below ensure the proponent is responsible for mitigation and elimination of noxious weeds resulting from project activities. Cumulative impacts are expected to be minor.
- Duration: Any impact would be expected to be short term.

Mitigations

The potential selection of action alternative would include the following stipulation in the seismic permit:

- The permittee shall re-seed any disturbed areas with a seed mixture agreed upon by the surface lessee and the Glasgow unit.
- All equipment utilized in operations must be inspected and maintained daily, prior to activities to ensure it is not leaking fluids, spreading noxious weeds, or creating an undue fire hazard.
- Any noxious or invasive weeds created or propagated resulting from the permitted actions must be mitigated and eliminated by the permittee.
- All vehicles utilized in the permitted activities must be equipped with fire extinguishers.
- Any fire created and the associated damage resulting from the permitted activities will be the sole responsibility of the permittee.

- Prior to entering the permitted area, the permittee must wash all equipment to avoid the spread of noxious and invasive weeds.
- Off-road vehicle traffic shall be limited only to travel that is necessary for the completion of permit operations.

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.

Current Conditions

The project area likely provides habitat to a variety of wildlife species which may include deer, antelope, small rodents, foxes and coyotes. A variety of birds including waterfowl and raptor species may also utilize the site and the associated habitat.

Alternatives

No Action Alternative: The no action alternative would not be expected to have any direct, secondary, or cumulative impacts to terrestrial, avian, and aquatic life and habitats.

Action Alternative:

- Direct Impacts: The selection of the action alternative would create a temporary disruption to general wildlife throughout the duration of seismic activities. Similar habitat and forage are adjacent to the project area and could sustain the wildlife displaced during seismic activities. Short-term, minor impacts are expected to wildlife habitat from the action alternative.
- Secondary Impacts: Negligible impacts would be expected, animals displaced from the project area would need to utilize surrounding lands while seismic activities occur.
- Cumulative Impacts: The selection of the action alternative would not be expected to change cumulative impacts to wildlife in the area in a significant manner.
- Duration: Any impact would be expected to be short term.

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.

Current Conditions

The Montana Natural Heritage Program's (MT NHP) species of concern – species occurrences yielded multiple results. Which can be viewed in Table 1 below

⊞	**V - Amphiscirpus nevadensis** *(Nevada Clubrush)* SOC
⊞	**V - Bolboschoenus fluviatilis** *(River Bulrush)* SOC
⊞	**B - Whooping Crane** *(Grus americana)* SOC
⊞	**B - American Bittern** *(Botaurus lentiginosus)* SOC
⊞	**B - Yellow Rail** *(Coturnicops noveboracensis)* SOC
⊞	**B - Bobolink** *(Dolichonyx oryzivorus)* SOC
⊞	**B - Black Tern** *(Chlidonias niger)* SOC
⊞	**R - Smooth Greensnake** *(Opheodrys vernalis)* SOC
⊞	**B - Sprague's Pipit** *(Anthus spragueii)* SOC
⊞	**B - Baird's Sparrow** *(Centronyx bairdii)* SOC
⊞	**B - Sedge Wren** *(Cistothorus stellaris)* SOC
⊞	**B - Nelson's Sparrow** *(Ammospiza nelsoni)* SOC
⊞	**V - Lobelia kalmii** *(Kalm's Lobelia)* SOC
⊞	**B - Forster's Tern** *(Sterna forsteri)* SOC
⊞	**B - Piping Plover** *(Charadrius melodus)* SOC
⊞	**B - Chestnut-collared Longspur** *(Calcarius ornatus)* SOC
⊞	**B - American White Pelican** *(Pelecanus erythrorhynchos)* SOC
⊞	**B - Burrowing Owl** *(Athene cunicularia)* SOC
⊞	**B - LeConte's Sparrow** *(Ammospiza leconteii)* SOC
⊞	**B - Black-crowned Night Heron** *(Nycticorax nycticorax)* SOC
⊞	**B - Franklin's Gull** *(Leucophaeus pipixcan)* SOC
⊞	**B - Common Tern** *(Sterna hirundo)* SOC
⊞	**B - Caspian Tern** *(Hydroprogne caspia)* SOC
⊞	**B - Clark's Grebe** *(Aechmophorus clarkii)* SOC
⊞	**B - Black-necked Stilt** *(Himantopus mexicanus)* SOC

Table 1: Species of concern occurrences within project area.

Alternatives

No Action Alternative: The no action alternative is not expected to have any direct, secondary, or cumulative impacts to unique endangered, fragile or limited environmental resources.

Action Alternative:

- Direct Impacts:

  Vegetation
  Nevada Colbrush – Nevada Colbrush is almost exclusively found in wetland areas. Per Montana administrative rule and the stipulations of the seismic permit, there is no activities allowed within 300 feet of a surface water area. Therefore, no impacts to Nevada Colbrush are expected.

River Bulrush – River Bulrush is found in wetland areas, marshes or riparian communities. Per Montana administrative rule and the stipulations of the seismic permit, there is no activities allowed within 300 feet of a surface water area. Therefore, no impacts to River Bulrush are expected.

Kalm's Lobelia – Kalm's Lobelia is found in high-organic wetlands areas. Per Montana administrative rule and the stipulations of the seismic permit, there is no activities allowed within 300 feet of a surface water area. Therefore, no impacts to Kalm's Lobelia are expected.

Birds

Whooping Crane – Whooping Crane Migration through Montana is rare. However, some individuals of the species likely migrate through the project area each year. Whooping Crane typically migrate out of Montana by mid-October. The project is not expected to occur until atleast November 2026. Some individuals may experience aesthetic impacts if they are present in the area during seismic activities. These impacts are expected to be negligible.

American Bittern – The American Bittern utilizes wetlands and marsh habitat and typically migrates out of Montana by the end of September. Due to the setback requirement from wetlands and the early migration of the species, no impacts to the American Bittern are expected.

Yellow Rail - The Yellow Rail utilizes wetlands and marsh habitat and typically migrates out of Montana by the end of October. Some individuals of the species may still be present in the project during operations. Impacts to the yellow rail would be similar to those described for the Whooping Crane.

Bobolink – Bobolink utilize native range grasslands for habitats and breeding, which is present in the project area. However, the Bobolink migrates out of Montana in early September. The Bobolink does utilize the ground in grassland areas to build its nests. Any nests would be expected to be vacant at this time, as juvenile bobolinks should be able to fly by the time project activities occur. Some vacant nests may be destroyed by the project activities, but nests are typically only used seasonally and not year after year. There are no impacts expected to Bobolink.

Black Tern – Black Tern utilize wetland and Marsh areas throughout Montana during the summer months, the latest a Black Tern was seen in Montana is September. Due to the timing of the proposed project and the setback requirements from wetlands, the Black Tern is not expected to be impacted.

Sprague's Pipit – The Sprague's Pipit arrives into Montana in early May and departs near the end of August it utilizes medium to intermediate height prairie grasslands to breed. It is expected that the Sprague's Pipit will have migrated out of Montana prior to the project occurring. Sprague's Pipit are not expected to be impacted by the proposed action.

Baird's Sparrow – Baird's Sparrow uses native rangelands in tame grasses. It typically enters Montana in April and leaves in September. Due to the timing of the proposed project, no impacts are expected to Baird's Sparrow.

Sedge Wren – The Sedge Wren is rate in Montana but utilizes wetland areas during the summer months in northeast Montana to breed. The species typically arrives in April and leaves by October. There may be individuals present in or near the project area during project activities, but seasonal timing and setback requirements from wetlands make impacts to the species negligible.

Nelson's Sparrow – Nelson's Sparrow utilize wetland areas in the northeastern portion of the state and typically migrate out of the state by October. There may be individuals present in or near the project area during project activities, but seasonal timing and setback requirements from wetlands make impacts to the species negligible.

Forster's Tern – Forster's Tern utilizes large marshes with extensive weed beds for breeding habitat. It typically migrates out of Montana by October. There may be individuals present in or near the project area during project activities, but seasonal timing and setback requirements from wetlands make impacts to the species negligible.

Piping Plover – The Piping Plover usually arrives in Montana in early May and leaves by late August. It utilizes unvegetated sand or pebble beaches on shorelines or islands in freshwater and saline wetlands. Due to the timing of the proposed project and the set back requirements from wetlands and surface water, no impacts are expected to Piping Plovers.

Chestnut-collared Longspur – The Chestnut-collared Longspur is a species that prefers native grasses that have been grazed or mowed. They typically enter Montana in May and leave by August. Due to the proposed timing of the project, no impacts are expected to Chestnut-collared Longspur.

American White Pelican – American White Pelican use a variety of aquatic and wetland habitats including rivers, lakes and reservoirs. The Pelican usually arrives in Montana in early April and migrates out of Montana in late September. Due to the timing of the project and the setback requirements from surface water, no impacts are expected to the American White Pelican.

Burrowing Owl – The Burrowing Owl are found in open grasslands in abandoned burrows dug by mammals such as prairie dogs. The earliest sitings of the owl in Montana are in March and the latest sitings are in October. Seismic activities would likely impact any Burrowing Owls that are still in the project area. The vibroseis trucks would likely damage or destroy any burrows that are drove over. It is expected however, that most, if not all individuals of the species will have migrated by the time the project activities begin. Because of this impacts to the Burrowing Owl are expected to be minor.

Leconte's Sparrow - The Leconte's Sparrow is a rare migratory inhabitant of Montana. They use wet meadow bogs often with a strong sedge component. Some individuals utilize areas in Sheridan County for breeding. The bird typically migrates out of Montana by September. Therefore, the impacts to Leconte's Sparrow are expected to be negligible.

Black-crowned Night Heron – The Black-crowned Night Heron is likely to utilize shallow bulrush or cattail marshes, most often within a grassland landscape. The birds typically migrate into Montana in April and migrate out of Montana in September. Due to setbacks from wetlands and the seasonal timing of the project, no impacts are expected to Black-crowned Night Heron.

Franklin's Gull – Prefers large relatively permanent prairie marsh complexes, the bird builds its nests over water on a supporting structure of emergent vegetation. The Gull typically enters Montana in mid-April and gone early to mid-October. Due to the setback requirements and seasonal timing of the project, no impacts are expected to the Franklin's Gull.

Common Tern - Nesting in Montana generally occurs on sparsely vegetated islands in large bodies of water, such as Medicine Lake and Bowdoin National Wildlife Refuge. The species typically arrives in Montana in April or May and departs by the end of September. Due to setback requirements and seasonal timing of the project no impacts are expected to the common tern.

Caspian Tern – The Caspian Tern begin arriving in the state in late April and early May in Montana. They prefer islands within large lakes or reservoirs, where sandy or stony beaches are used for nesting. The Caspian Tern begins arriving in late April to mid-may in Montana and departs by the end of September. Due to setback requirements and seasonal timing of the project, no impacts are expected to the Caspian Tern.

Clark's Grebe – Clark's Grebe are reported breeding only at very large lakes and reservoirs in Montana. This includes Medicine Lake which is near the project area. The bird typically migrates into Montana in early May and leaves by October. Due to the seasonal timing of the project and the setback requirements from wetlands, no impacts are expected to Clark's Grebe.

Black-necked Stilt – Breed on the edges of shallow marshes, often on islands. The bird typically arrives in the last part of April and is gone by late August. Due to the setback requirements and the seasonal timing of the project, there are no impacts to Black-necked Stilt.

Reptile

Smooth Greensnake – The smooth greensnake prefer mesic habitat such as wet prairies, meadows, marshes, open forests, and riparian corridors with lush shrubby and herbaceous cover. The snake will be hibernating underground during project activities. Seismic activities are likely to disrupt hibernating green snakes and may even collapse hibernating areas thereby trapping and killing individuals of the species. The setbacks that are required from wetland areas is likely to help mitigate impacts to the greensnake. The likelihood that a seismic vibroseis line is directly above a Smooth Greensnake hibernation burrow is slim. However, individuals of the species may be impacted by the project. The overall impact to the species as whole from project activities is expected to be minor.

- Secondary Impacts: Secondary impacts to any of the species of concern listed are expected to be aesthetic. Any individuals of the species that are present near the project area would be expected to be able to hear and see the operations. This may cause them to seek other suitable

habitat away from the project area temporarily, but they would be expected to be able to return upon cessation of the project activities.

- Cumulative Impacts: Many of the bird species that are listed in the species occurrences are either highly dependent upon wetlands or grasslands. Drought and conversion of grasslands into farmlands has had an impact upon their population. This project would not disturb wetlands, and would have minor impacts to grasslands. It is not expected to significantly damage habitat that any of the species of concern rely heavily upon. Overall, the cumulative impacts to species of concern from the proposed action are expected to be negligible.
- Duration: Any impacts would be expected to be short term.

Mitigations

The potential selection of action alternative would include the following stipulation in the seismic permit:

- Permitted activities shall not occur prior to November 1, 2026.

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

Current Conditions

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 no cultural or paleontological resources have been identified in the APE. Considering the low-impact nature of the proposed seismic project, no additional archaeological investigative work is recommended. As such, the proposed seismic project is expected to have *No Effect* to *Antiquities*.

Alternatives

No Action Alternative: The no action alternative is not expected to have any direct, secondary, or cumulative impacts to historical and archaeological sites.

Action Alternative:

- Direct Impacts: Considering the low-impact nature of work proposed, seismic activities are expected to 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.
- Secondary Impacts: No secondary impacts expected.
- Cumulative impacts: No cumulative impacts expected.
- Duration: No impacts are expected; therefor duration is not applicable.

Mitigations

The potential selection of action alternative would include the following stipulation in the seismic permit:

- If any cultural or paleontological resources are encountered during seismic activities, all operations must stop and the proponent shall contact DNRC.

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.

Current Conditions

The proposed project area is in a very rural setting. There is a home site lease within the project area. The lessee of the homesite is also the Ag & Grazing Lessee. The town of Dagmar Montana is approximately one-half-mile away from the project area.

Alternatives

No Action Alternative: The no action alternative is not expected to have any direct, secondary, or cumulative impacts to aesthetics.

Action Alternative:

- Direct Impacts: An increase in noise from trucks and heavy equipment may be heard adjacent to the project area. Local traffic such as farmer and ranchers may hear or see project operations. If the action alternative is selected, there shall be a stipulation added to only allow for project activities during daylight hours.
- Secondary Impacts: No secondary impacts expected.
- Cumulative Impacts: The cumulative impacts in the form of added noise and visual disturbance would be expected to be negligible.
- Duration: Any impacts would be expected to be short term.

Mitigations

The potential selection of action alternative would include the following stipulation in the seismic permit:

- Work shall be limited to daylight hours only.

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.

Current Conditions

The composition of land, water and air is described within other sections of this document. The project would require the use of diesel fuel and gasoline for equipment.

Alternatives

No Action Alternative: The no action alternative is not expected to have any direct, secondary, or cumulative impacts to the demands of environmental resources of land, water, air or energy.

Action Alternative:

- Direct Impacts: The impacts to land, water, and air have been evaluated in each of their respective resource sections. The energy resources needed to complete the project would be diesel fuel and gasoline. Both are abundant and readily available near the project area. The impacts to energy resources by the proposed action are expected to be negligible.
- Secondary Impacts: No secondary impacts expected.
- Cumulative Impacts: No cumulative impacts expected.
- Duration: Any impacts would be expected to be short term.

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.

Current Conditions

This tract has an active Ag & Grazing lease, an active homesite lease, an active oil and gas lease and several easements.

No Action Alternative: The no action alternative is not expected to have direct, secondary, or cumulative impacts to other environmental documents or projects pertinent to the area.

Action Alternative:

- Direct Impacts: The grazing lessee would likely realize a short-term minor loss in available forage in their leased area. However, the seasonal timing of the project would minimize impacts to the vegetative damages. The proponent must settle surface damages with the lessee in accordance with Montana administrative rules. The home site lessee may be impacted by project activities. Most impacts are expected to be aesthetic. There is a setback requirement from homes for seismic activities in Montana Administrative Rule of 330 feet. The oil and gas lessee would be expected to benefit from the proposed activity, as it would provide critical information relating to the subsurface underlying the tract. This would be utilized to determine potential drilling targets and could lead to significant future development of oil or gas resources on the tract. The oil and gas lessee must grant permission to the proponent to perform seismic on the tract.
- Secondary Impacts: If seismic activities show favorable results for the exploration of oil and gas, there may be future development on this tract in the form of a well, its pad and access road. If future development does occur, another assessment will be conducted evaluating the impacts of the proposed action and the surface lessee would be compensated for any damages resulting from such action.
- Cumulative Impacts: The cumulative impacts from the proposed activity to the surface lessee are expected to be negligible. The cumulative impacts of the proposed activity to the oil and gas lessee could be significant in a positive manner.
- Duration: Any impacts to the surface lessee would be expected to be short term. Impacts to the oil and gas lessee may be long term.

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.

Current Conditions

The current conditions at the site pose little risk to human health and safety. There is some uneven ground that may present risks for trips, slips or falls to anyone that is on the tract.

Alternatives

No Action Alternative: The no action alternative is not expected to have any direct, secondary, or cumulative impacts to human health or safety.

Action Alternative:

- Direct Impacts: The proposed action utilizes heavy equipment and machinery. The activities do not pose any risk to the general public, but they do contain risks for the individuals conducting the seismic activity. The company conducting seismic activity is solely responsible for the training, health and safety of their employees. Proper training and personal protective equipment mitigate the impacts to human health and safety to minor impacts. If the action alternative is selected it should contain an indemnification stipulation stating that any injury or death caused by project activities is the sole responsibility of the permittee and that the permittee shall hold the Department harmless for any injuries, losses, damages, deaths or liabilities.
- Secondary Impacts: No secondary impacts expected.
- Cumulative Impacts: No changes to cumulative impacts would be expected.
- Duration: Impacts may be short-term or long-term.

Mitigations

The potential selection of action alternative would include the following stipulation in the seismic permit:

- The permittee shall indemnify and hold harmless the State of Montana from any claims, damages, injuries, losses, deaths or liabilities resulting from the permitted activities.

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

Current Conditions

The project area is currently utilized for agricultural production, the surface lessee utilizes the area to graze livestock as well.

Alternatives

No Action Alternative: The no action alternative would not be expected to have any direct, secondary, or cumulative impacts to industrial, commercial, and agriculture activities and production.

Action Alternative:

- Direct Impacts: Seismic activities are commercial in nature. If seismic results are favorable, it could lead to future commercial oil and gas production. The proposed activity would have minor impacts on the current agricultural activities which have already been evaluated in this document.
- Secondary Impacts: No secondary impacts would be expected.
- Cumulative Impacts: No changes to cumulative impacts would be expected.
- Duration: No impacts are expected; Therefor duration is not applicable.

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.

Current Conditions

Most individuals who are employed in the project are farmers or ranchers. There is some legacy oil and gas production that employs some people in the area.

Alternatives

No Action Alternative: The no action alternative is not expected to have any direct, secondary, or cumulative impact to the quantity and distribution of employment.

Action Alternative:

- Direct Impacts: No direct impacts are expected to quantity and distribution of employment from the selection of the action alternative.
- Secondary Impacts: No secondary impacts expected.
- Cumulative Impacts: No cumulative impacts could be expected.
- Duration: No impacts are expected; Therefor duration is not applicable.

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.

Current Conditions

Trust land is exempt from local property tax. Operators and lessees conducting business on Trust Lands must pay business taxes.

Alternatives

No Action Alternative: The no action alternative is not expected to have any direct, secondary, or cumulative impacts on local and state tax bases or tax revenues.

Action Alternative:

- Direct Impacts: No direct impacts to local and state tax base and tax revenue is expected from the selection of the action alternative.
- Secondary Impacts: No secondary impacts expected.
- Cumulative Impacts: No cumulative impacts expected.
- Duration: 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.

Current Conditions

The project area is in a rural portion of Sheridan County where the traffic is limited to local residents.

Alternatives

No Action Alternative: The no action alternative is not expected to have any direct, secondary, or cumulative impact on the demand for government services.

Action Alternative:

- Direct Impacts: During seismic activities an increase in local traffic may occur. The action alternative would have short-term and negligible impacts to traffic patterns. There will be no changes to fire protection, police, schools or other government services resulting from the selection of the action alternative.
- Secondary Impacts: No secondary impacts expected.
- Cumulative Impacts: No cumulative impacts expected.
- Duration: No impacts are expected; therefor duration is not applicable.

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.

Current Conditions

There are no known environmental plans or goals for the project area. The USFWS owns land adjacent to the project area and there may be management plans for that area.

Alternatives

No Action Alternative: The no action alternative is not expected to have any direct, secondary, or cumulative impacts to locally adopted environmental plans or goals.

Action Alternative:

- Direct Impacts: No impacts expected, there are no known zoning or management plans.
- Secondary Impacts: No secondary impacts expected.
- Cumulative Impacts: No cumulative impacts expected.
- Duration: No impacts are expected; Therefore, duration is not applicable.

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.

Current Conditions

The proposed project area receives minimal amounts of public recreation. It does not provide access to wilderness areas.

Alternatives

No Action Alternative: The no action alternative is not expected to have any direct, secondary, or cumulative impacts to the access to and quality of recreational and wilderness activities.

Action Alternative:
- Direct Impacts: The proposed action may have short-term minor impacts to recreation during project activities.
- Secondary Impacts: No secondary impacts expected.
- Cumulative Impacts: No cumulative impacts expected.
- Duration: Any impact would be expected to be short term.

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.

Current conditions

There are very few houses near the project area, the closest town is Dagmar.

Alternatives

No Action Alternative: The no action alternative is not expected to have any direct, secondary, or cumulative impacts to the density and distribution of population and housing.

Action Alternative:
- Direct Impacts: The selection of the action alternative would not be expected to have any impact upon the density and distribution of population and housing.
- Secondary Impacts: No secondary impacts expected.
- Cumulative Impacts: No cumulative impacts expected.
- Duration: No impacts are expected; Therefore duration is not applicable.

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

Current conditions

There are no known native or traditional lifestyles in the project area.

Alternatives

No Action Alternative: The no action alternative is not expected to have direct, secondary, or cumulative impacts on social structures, native or traditional lifestyles or communities.

Action Alternative:

- Direct Impacts: No direct impacts are expected to native or traditional lifestyles.
- Secondary Impacts: No secondary impacts expected.
- Cumulative Impacts: No cumulative impacts expected.
- Duration: No impacts are expected; Therefore, duration is not applicable.

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

Current Conditions

There are no known unique qualities of the area.

Alternatives

No Action Alternative: The no action alternative is not expected to have direct, secondary, or cumulative impacts to cultural uniqueness or diversity.

Action Alternative:

- Direct Impacts: No direct impacts are expected to unique qualities of the area.
- Secondary Impacts: No secondary impacts expected.
- Cumulative Impacts: No cumulative impacts expected.
- Duration: No impacts are expected; Therefore, duration is not applicable.

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.

A seismic application has been filed with the appropriate $10.00 fee. If the action alternative is selected, the permittee would pay $100 per mile of vibroseis. In the preliminary plan submitted by the proponent there were approximately 7.9 miles of vibroseis lines. This equates to $790 total, which the proponent shall submit prior to authorization of the permit. If actual work completed differs from the preliminary plan, expenses shall be reconciled by the Department and permittee.

	Name: Zack Winfield	**Date:** 10/23/2026

EA Checklist Prepared By:	Title:	Petroleum Engineer

V. FINDING

25. ALTERNATIVE SELECTED:

After reviewing this document, the project file and the applicable statutes, rules and policies that govern seismic activities on Montana Trust Lands, I have decided to select the action alternative, and the Department will issue a seismic permit to the proponent.

Through the utilization of the special stipulations listed below, the impacts to the respective resources from seismic activities will be non-significant. The issuance of the seismic permit advances the mission of Montana Trust Lands by generating revenue for the school trust beneficiary of the tract. The future income-generating capacity of the land will be protected by the provisions of the seismic license and the associated special stipulations included within.

26. SIGNIFICANCE OF POTENTIAL IMPACTS:

I conclude all identified potential impacts will be mitigated by utilizing the stipulations listed below and the provisions of the permit. No significant impacts will occur by implementing the selected alternative.

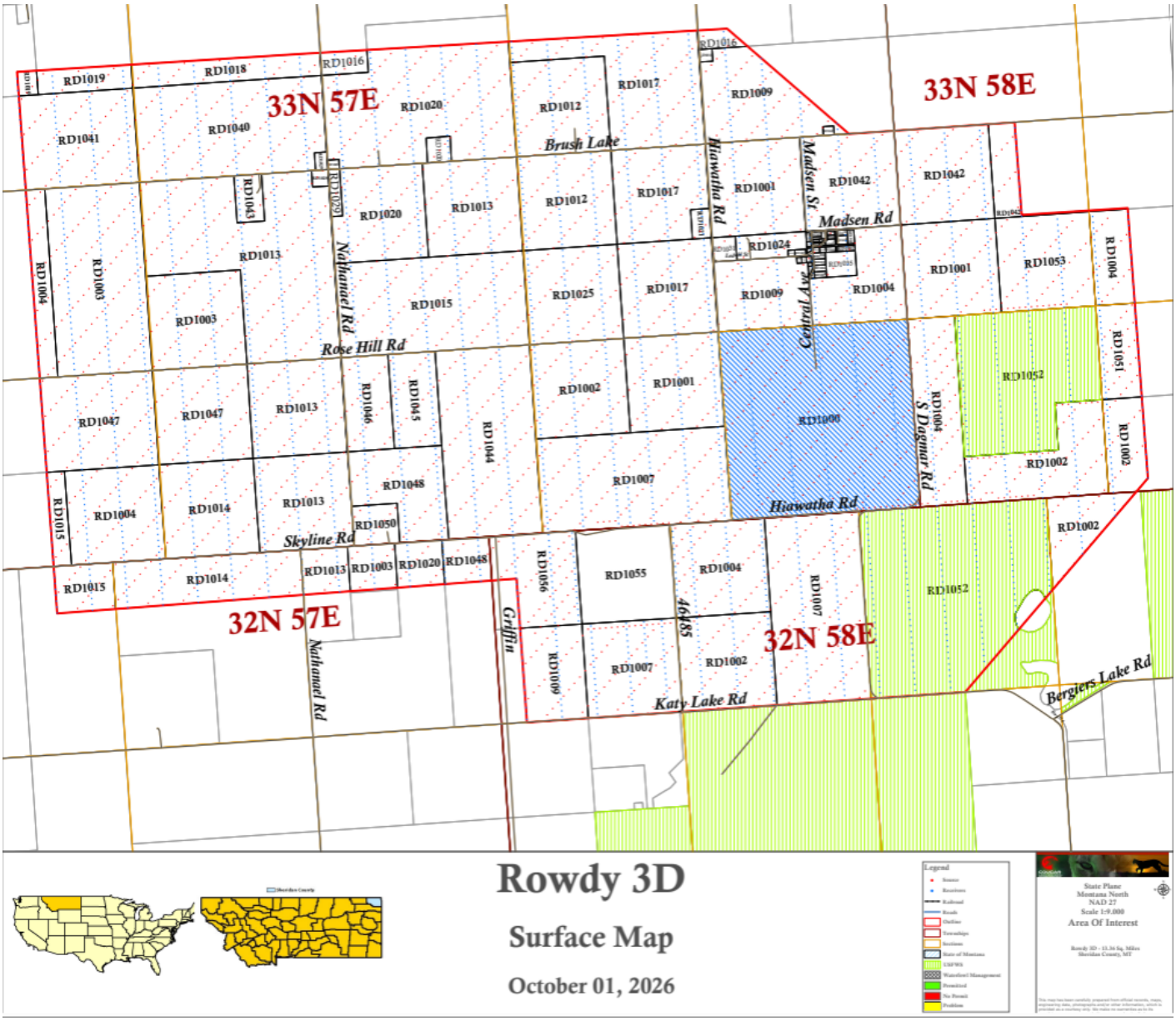
- All activities allowed under this permit are limited to when the ground is dry. No work may be conducted when soils are wet or muddy.
- Vehicles are not allowed to travel on topography steeper than 15% grade.
- Any rutting or damages to soil created by the permittee will be reclaimed immediately upon completion of activity in the area.
- All equipment utilized in operations must be inspected and maintained daily, prior to activities to ensure it is not leaking fluids, spreading noxious weeds, or creating an undue fire hazard.
- The permittee will be required to re-seed any disturbed areas with an approved seed mixture by the DNRC –Glasgow Unit and monitor for noxious weeds.
- All equipment utilized in operations must be inspected and maintained daily, prior to activities to ensure it is not leaking fluids, spreading noxious weeds, or creating an undue fire hazard.
- Any noxious or invasive weeds created or propagated resulting from the permitted actions must be mitigated and eliminated by the permittee.
- All vehicles utilized in the permitted activities must be equipped with fire extinguishers.
- Any fire created and the associated damage resulting from the permitted activities will be the sole responsibility of the permittee.
- Prior to entering the permitted area, the permittee must wash all equipment to avoid the spread of noxious and invasive weeds.
- Off-road vehicle traffic shall be limited only to travel that is necessary for the completion of permit operations.
- Permitted activities shall not occur prior to November 1, 2026.
- If any cultural or paleontological resources are encountered during seismic activities, all operations must stop and the proponent shall contact DNRC.

- Work shall be limited to daylight hours only.
- The permittee shall indemnify and hold harmless the State of Montana from any claims, damages, injuries, losses, deaths or liabilities resulting from the permitted activities.

27. NEED FOR FURTHER ENVIRONMENTAL ANALYSIS:

	EIS		More Detailed EA	X	No Further Analysis

EA Checklist Approved By:	**Name:**	Don Pyrah
	Title:	Glasgow Unit Manager
Signature:		**Date**: 10/23/2026


33N 57E
33N 58E
32N 57E
32N 58E
Brush Lake
Madsen Rd
Rose Hill Rd
Hiawatha Rd
Skyline Rd
Katy Lake Rd
Bergiers Lake Rd
S Dagmar Rd
Central Ave
Nathanael Rd
Griffin
Rowdy 3D
Surface Map
October 01, 2026