ENVIRONMENTAL ASSESSMENT

Project Name:	West Butte Seismic
Proposed Implementation Date:	Summer/Fall 2026
Proponent:	Echo Seismic USA, Inc
Location:	Surface and Minerals T37N, Range 1E, Section 16
County:	Toole
Trust:	Common Schools

I. TYPE AND PURPOSE OF ACTION

Echo Seismic USA, Inc. (Henceforth referred to as the proponent) has requested to conduct a seismic survey on the Montana Trust Lands. This project would utilize heavy vibration equipment, shot-hole explosives and seismic receiving equipment for the purpose of mapping the subsurface below the tract for oil and gas potential. The trust lands involved are part of a much larger seismic project that is being proposed. The proponent is proposing to utilize both vibroseis and shot holes 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 and received by the receiver lines. Shot holes, similarly, send vibrations into the subsurface which are reflected and received by the receiver. However, the process in which this occurs is different from vibroseis. In the shot-hole method, a 3.75-inch diameter hole is drilled to a depth of 40 feet. A 2.2-pound explosive is then put into the hole and detonated. The hole is then back filled with the original cuttings.

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 the proper documentation for this project, an application and other necessary information. The Conrad Unit office staff has been informed of the application. The proponent has contacted the Department's surface lessee and has settled surface damages with the lessee.

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

Geophysical exploration permit – Toole 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.

The duration of an impact is quantified as follows:
• **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.

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

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: The project is proposed on the western side of West Butte in the Sweet Grass Hills. The Sweet Grass Hills are a unique geologic feature, they are an island mountain range that is otherwise surrounded plains. They were created by volcanic activity that occurred millions of years ago and are a prominent feature on the Montana hi-line. Per the Montana Bureau of Mines and Geology the proposed area is comprised of the Eagle formation. The site contains steep topography that may present operational challenges.

Soil: The soil composition of section 16, T37N, Range 1E is complex and includes many different units. The properties of these units are included in Table 1.

Soil Name	Risk of Compaction	Risk of Rutting	Erosion Hazard	Reclamation suitability
Farnuff Clay Loam	Medium	Severe	Slight	Well-Suited
Williams-Vida Loam	Medium	Severe	Slight	Well-Suited
Vida-Williams Zahill	Medium	Severe	Slight	Well-Suited
Zahill-Vida Clay Loam	Medium	Severe	Slight	Moderately-Suited
Zahil-Zahl Complex	Medium	Severe	Moderate	Moderately-Suited
Zahil-Zahl Clay Loam	Medium	Severe	Moderate	Poorly-Suited

Table 1: Soil properties in Section 16, Township37N, Range 1E.

Alternatives

No Action Alternative: The selection of the no action alternative would not be expected to have any direct, secondary, or cumulative impacts to the 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. The project would not alter the Sweet Grass Hills in a structural or meaningful manner.

  Soils at the project site do have a potential to be impacted by the project. Table 1 shows that all soils 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: No additional cumulative impacts would be expected to geology, soil quality, stability and moisture from the selection of the action alternative.

- Duration: The impacts listed above would be anticipated 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 unnamed drainages. The tract also contains three natural springs. The springs are located in the NW4NW4, the NE4NE4 and the NE4SE4.

Ground Water: A search of the Montana GWIC shows that no water wells have been drilled in section 16.

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 has the potential to impact water quality, quantity and distribution. Shotholes may alter springs on the tract if they are discharged too closely. If the action alternative is selected, the proponent would be required to maintain a minimum of a 300-foot setback from wetlands or other surface water with any vibroseis. Additionally, no blasting or shot hole activities may occur within a 1320-foot radius of the springs on the tract. Both of these setback requirements are established standards within Montana Administrative Rule. Receiver lines and nodes do not require a setback from surface water. It is difficult to know the depth of groundwater on the tract, as there are no wells nearby. The abundance of springs and surface water on the tract suggests that there may be a shallow or perched aquifer at the site. This means that shot holes may enter groundwater. Drilling activities would be expected to create some local turbidity in the groundwater table, but overall the impacts to the quality of groundwater would be expected to be minor. To protect the quality of the groundwater, the use of an oil based lubricant in drilling fluid will be prohibited.
- Secondary Impacts: No secondary impacts expected.
- Cumulative Impacts: No additional cumulative impacts to water quality, quantity and distribution would be expected.

- 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:

- A 300-foot setback from all water sources, including wells, springs, reservoirs, pits, pipelines, and stock tanks must be maintained for all activities. For drilling and blasting activities, a 1320-foot setback must be maintained from the three springs identified on the tract.
- 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 drilling of shot holes must be completed with a water-based lubricant or mud. Any oil-based lubricants are not allowed under this permit.

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 agricultural activities and vehicles travelling on adjacent county roads.

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 may 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 based upon several fuel usage scenarios.

Diesel Usage	Gasoline Usage	Total CO2 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 CO2 emissions expected to be created by the project are non-significant when compared to the total daily emissions of the region, Montana and the United States. The emission of CO2 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.
- 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 16 is comprised of Great Plains Shrubland and Great Plains Mixedgrass Prairie according to the Montana Natural Heritage Program. These systems contain native grasses such as western wheatgrass, Idaho fescue and rough fescue. Common shrubs are serviceberry, skunkbush, snowberry, and silverberry.

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 would be damaged by the proposed action and may not be viable for animal grazing after the project's completion. It is expected that these plants 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 and shot holes are occurring. The proponent shall spread a Conrad-Unit approved native seed mixture on all vegetation disturbances and shall monitor and eliminate any noxious weed introduction or growth resulting from the project activities.
- Secondary Impacts: As a result of the selection of the action alternative vegetation may be disturbed allowing for the propagation of weeds. In areas where vegetation does not come back, the proponent will be responsible for reseeding the affected areas with a seed mixture established by the Northeastern Land Office. Secondary impacts are expected to be short term and negligible.
- Cumulative Impacts: There are no cumulative impacts to vegetation resulting from the selection of the action alternative.
- 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 will be required to re-seed any disturbed areas with an approved seed mixture by the DNRC – Lewistown 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 spreading of noxious and invasive weeds.
- Off-road vehicle traffic shall be limited to travel that is absolutely 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 elk, deer, antelope, and black bear. Small rodents, and other mammals including small to medium sized predators such as foxes and coyotes may also be found on the project site. A variety of birds 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 have cumulative impacts to wildlife in the area.
- 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 species of concern – species occurrences yielded only one occurrence for the proposed project area:

Gray Comma - *Polygonia progne* – Is a butterfly that is described by the MT NHP in the following manner: Forewing 2.3-2.6 cm. Upperside bright orange-brown with a wide dark border; winter form (from 2nd flight) has a border covering only about 1/4 of the wing, both enclosing a few small yellow spots; underside charcoal gray and heavily striated, outer portion of forewing whitish with 3-4 light chevrons in a dark border, silver mark in center of hindwing is small, slender, L-shaped, tapered at both ends.

It is rare to uncommon in Montana, and the most recent observation in Toole county was over twenty years ago. Its habitat is listed as deciduous woodlands, riparian woodlands, forest openings and aspen parkland. The project area does contain this type of habitat.

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: The habitat in which the Gray Comma typically utilizes is present within the project area. However, the setback stipulations that were included within the water resources of the document should mitigate the impacts to the Gray Comma as well. The habitat the Gray Comma utilizes is present in the project area but is near surface water. Additionally, from a practical standpoint, it would be extremely difficult to conduct seismic operations within a forested area. Vibroseis trucks would not be able to access these areas. Due to these factors, the impacts expected to the Gray Comma from the action alternative are expected to be negligible.
- Secondary Impacts: No secondary impacts to Gray Comma are expected resulting from the selection of the action alternative.
- Cumulative Impacts: The impacts created by the selection of the action alternative is not expected to meaningfully change the cumulative impacts to Gray Comma.
- Duration: Any impact would be expected to be short term.

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, but it should be noted that Class III level inventory work has not been conducted there to date.

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: None

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 in which there is little human activity. There are several ranch houses in the vicinity, and the county is approximately one-half mile away from the nearest portion of 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. From adjacent roads, and ranch houses the seismic activities may be visible. The project area is not publicly accessible. Upon reclamation, the site will be returned to a landscape consistent with the surroundings. If the action alternative is selected, a stipulation should be added to the permit that work shall only occur during daylight hours only. Impacts to aesthetics are expected to be short-term and minor.
- Secondary Impacts: No secondary impacts expected.

- Cumulative Impacts: No cumulative impacts in the form of added noise and visual disturbance would be expected.
- 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 of these 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 which is held by Simmes Ranch, Inc. The tract also has an active oil and gas lease, the current lessee is Lonewolf Energy.

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 realize a short-term minor loss in available forage in their leased area. The surface damages have been settled between the surface lessee and the proponent, a signed surface damages settlement from has been received by the Department. Upon reclamation the impacted areas would return to native rangeland. 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 lessee of record has provided written permission for the proponent to conduct seismic.
- 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: Negligible changes cumulative impacts expected from the proposed activity.
- Duration: Any impacts would be expected to be short 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 steep terrain and 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, machinery and explosives. The activities do not pose any risk to the general public, but it does contain risks for the individuals conducting the seismic activity. The company conducting the seismic activity is solely responsible for the training, health and safety of their employees. 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: 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:

- 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.

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: None

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: None

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 Toole County where the traffic is limited to local ranchers, employees of the proponent and recreationists.

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: Any impacts would be expected to be short term.

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.

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: None

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 is not publicly accessible, so it does not receive recreational use. The parcel is not, nor does it 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 is not expected to have any impacts on access to or quality of recreation or wilderness activities.
- Secondary Impacts: No secondary impacts expected.
- Cumulative Impacts: No cumulative impacts expected.
- Duration: Any impacts 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 towns are Kevin and Sunburst.

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 impacts upon the density and distribution of population and housing.
- Secondary Impacts: No secondary impacts expected.
- Cumulative Impacts: No cumulative impacts expected.
- Duration: None

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

Current conditions

The Blackfoot Reservation is located approximately 30 miles west of 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: None

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: 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.

A seismic application has been filed with the appropriate $10.00 fee. If the action alternative is selected, the permittee would pay $50 per shot hole and $100 per mile of vibroseis. In the preliminary plan submitted by the proponent there are 98 shot holes located on State Trust Land and approximately 3 miles of vibroseis lines. This equates to $5,200 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.

EA Checklist Prepared By:	**Name:**	Zack Winfield	**Date:**	6/1/2026
	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 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.
- Prior to entering the permitted area, the permittee must wash all equipment to avoid the spreading of noxious and invasive weeds.
- Off-road vehicle traffic shall be limited to travel that is absolutely necessary for the completion of permit operations.

- The drilling of shot holes must be completed with a water-based lubricant or mud. Any oil-based lubricants are not allowed under this permit.
- The permittee will be required to re-seed any disturbed areas with an approved seed mixture by the DNRC – Conrad Unit and monitor for noxious weeds.
- 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.
- 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:

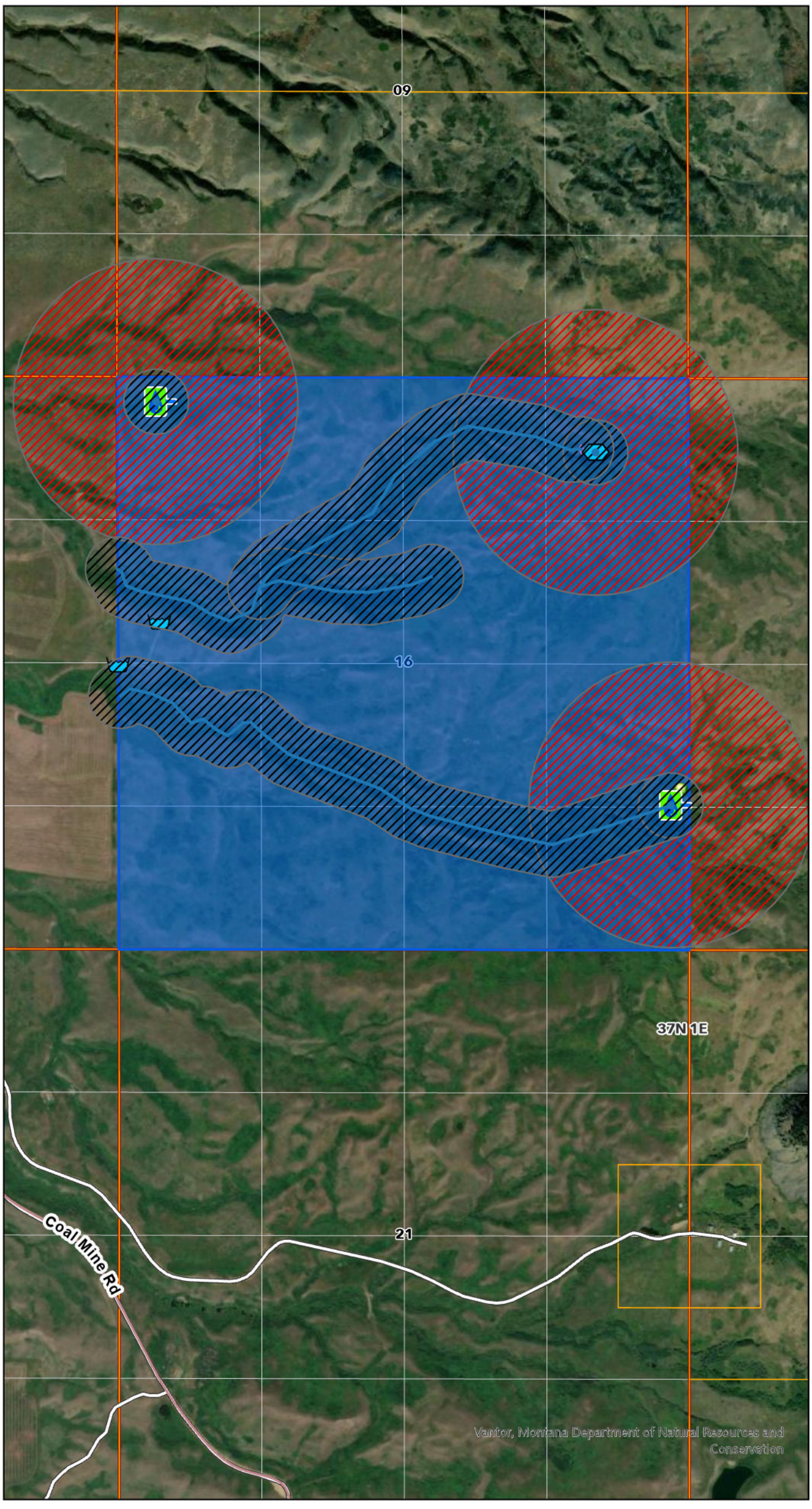
[ ]	EIS	[ ]	More Detailed EA	[X]	No Further Analysis

EA Checklist Approved By:	**Name:** Erik Eneboe **Title:** Conrad Unit Manager
Signature: 	**Date**:6/3/2026

Seismic Permit Map - Areas of Avoidance
Township 37N, Range 1E, Section 16
Toole County, MT

Legend

- No Blasting, Drilling, or Vibroseis - recievers allowed
- No Blasting or Drilling



0 0.25 0.5 1 Miles

N