CHECKLIST ENVIRONMENTAL ASSESSMENT

Project Name:	Bird Seismic 2015
Proposed Implementation Date:	August 2015
Proponent:	Bird Seismic Services, Inc. James Ranke cell: (928)719-1848
Location:	Section 36 – T1N-R34E (Common School Trust)
County:	Big Horn

I. TYPE AND PURPOSE OF ACTION

Bird Seismic Services, Inc. (henceforth referred to as the proponent) has requested to conduct a seismic survey on the state trust land listed above on behalf of Briscoe Petroleum (who also has the mineral lease on Section 36). This project would utilize heavy vibration equipment and seismic detecting equipment for the purpose of oil and gas exploration. This proposed survey is exploring the Snyder Field Prospect and the Dugout Prospect.

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 to request this project. The SLO staff has been notified of the project. Mineral Resource Specialist, Heidi Crum, and Petroleum Engineer, Trevor Taylor, completed a site visit on July 27, 2015. The proponent has contacted the surface lessee to discuss potential impacts and settlement of damages.

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

None

3. ALTERNATIVES CONSIDERED:

No Action Alternative: The proposed seismic exploration project will not occur. Current non-motorized recreational use and grazing leasing would continue.

Action Alternative: Bird Seismic Services, Inc. will have permission conduct seismic exploration for oil and gas in the SE ¼ of Section 36.

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.

No Action Alternative: No impacts expected.

Action Alternative:
The SE¼ of Section 36, where seismic activities will take place, is composed of Upper Cretaceous Bearpaw Shale that is 800-860 feet thick. This unit is described as a shale intermixed with siltstone and sandstone beds near the top. It also contains calcareous concretions and bentonite beds in the middle.

Soil compositions in the SE¼ of Section 36, where the seismic activities will take place, consist of clayey and clay loam. Web soil survey indicates these soils have low erosion hazards, have a good resistance to compaction, excellent restoration potential, and a fair rating for handling traffic when conditions are dry. Some soil disturbance may take place through the use of heavy vibration equipment. Major disturbance can be mitigated through the exclusion of heavy equipment on some areas of trust land in which the soils are excessively compactable or fragile. Heavy equipment will not be allowed into any wetland, sub-irrigated sites, or rivers, streams, springs, reservoirs, or ponds on the project. Some soil compaction may take place in areas where heavy equipment will be operated.

The seismic contractor agrees to restore any disturbed soil from seismic activities.

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.

No Action Alternative: The proposed seismic exploration project will not occur. Current non-motorized recreational use and grazing leasing would continue.

Action Alternative: Water quality will be maintained by excluding access to any area where ground or surface water could potentially be disturbed. All equipment will be kept out of rivers, wetlands, sub-irrigated ground or any area where water quality, quantity or distribution could be affected. A spring was located approximately 200 feet from a proposed source line. The Department has approved the use of low impact seismic operations at the proposed location, provided that the proponent agree to mitigate any damage to the spring by developing another water source to account for water flow lost from the damaged spring.

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.

No Action Alternative: The proposed seismic exploration project will not occur. Current non-motorized recreational use and grazing leasing would continue.

Action Alternative: Pollutants and particulates may be increased during the project as a result of dust from vehicles traveling along the seismic lines. After the completion of the project pollutant and particulate levels should return to normal.

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.

No Action Alternative: The proposed seismic exploration project will not occur. Current non-motorized recreational use and grazing leasing would continue.

Action Alternative: Vegetative communities may be temporarily affected by this project. The use of heavy equipment has the potential to damage some areas of the plant community. This may come from the vegetation being compacted by heavy equipment. Damage to the plant community should be less at this time of year due to the fact that most species have produced seed. This site is in the sagebrush steppe ecosite with intermittent Great Plains riparian areas along Little Ninemile Creek. Species found on the site include; bluebunch wheatgrass, blue grama, big sagebrush, little bluestem, Black Samson, plains muhly, prickly pear cactus, greed needlegrass, and western wheatgrass.

Invasive species on the site include cheatgrass and Dalmatian toadflax.

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.

No Action Alternative: The proposed seismic exploration project will not occur. Current non-motorized recreational use and grazing leasing would continue.

Action Alternative: Section 36 is in the general sage grouse habitat area, although is located approximately 15 miles from an active sage grouse lek. There may be minimal disruption to the wildlife in the area. The scale and length of the project should not be enough to permanently disrupt wildlife species. Species in the area include antelope, whitetail deer, mule deer, raptors and other birds, various rodents, rabbits, reptiles and others.

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.

No Action Alternative: The proposed seismic exploration project will not occur. Current non-motorized recreational use and grazing leasing would continue.

Action Alternative: A search was conducted using the Montana Natural Heritage Program database to identify point observations of species of concern in the section of the proposed activity. No species of concern have been documented in this section.

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

TLMS search indicated that lithic scatter has been found on a ridge in the north central part of Section 36. Seismic activities will be contained to SE¼ of this section so will not impact the archeologic items documented. Mineral Resource Specialist, Heidi Crum, and Petroleum Engineer, Trevor Taylor, completed a site visit on July 27, 2015 and walked the seismic source line, in which no other archeological resources were found.

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.

No Action Alternative: The proposed seismic exploration project will not occur. Current non-motorized recreational use and grazing leasing would continue.

Action Alternative: Very little impact should be noticed aesthetically in the scope of this project. There should be minimal lasting effects on the landscape from this project. The project will be short term and the seismic crew will reclaim any sites that show disturbance.

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.

No Action Alternative: The proposed seismic exploration project will not occur. Current non-motorized recreational use and grazing leasing would continue.

Action Alternative: None

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.

None.

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 Action Alternative: The proposed seismic exploration project will not occur. Current non-motorized recreational use and grazing leasing would continue.

Action Alternative: No human and health safety risks were identified as a result of the proposed project other than the typical occupational hazards that coincide with seismic survey operations.

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

No Action Alternative: The proposed seismic exploration project will not occur. Current non-motorized recreational use and grazing leasing would continue.

Action Alternative: 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.

No Action Alternative: The proposed seismic exploration project will not occur. Current non-motorized recreational use and grazing leasing would continue.

Action Alternative: The proposed project would not create, move, or eliminate jobs.

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

No Action Alternative: The proposed seismic exploration project will not occur. Current non-motorized recreational use and grazing leasing would continue.

Action Alternative: No impact.

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

No Action Alternative: The proposed seismic exploration project will not occur. Current non-motorized recreational use and grazing leasing would continue.

Action Alternative: No impact.

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 Action Alternative: The proposed seismic exploration project will not occur. Current non-motorized recreational use and grazing leasing would continue.

Action Alternative: No impact.

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

No Action Alternative: The proposed seismic exploration project will not occur. Current non-motorized recreational use and grazing leasing would continue.

Action Alternative: No impact.

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

No Action Alternative: The proposed seismic exploration project will not occur. Current non-motorized recreational use and grazing leasing would continue.

Action Alternative: No impact.

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

No Action Alternative: The proposed seismic exploration project will not occur. Current non-motorized recreational use and grazing leasing would continue.

Action Alternative: No impact.

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

No Action Alternative: The proposed seismic exploration project will not occur. Current non-motorized recreational use and grazing leasing would continue.

Action Alternative: No impact.

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 Seismic Exploration Permit for Oil and Gas fee is waived since Bird Seismic Services is the client of the current lessee; Briscoe Petroleum. The existing grazing lease on the State Sections listed above provide approximately $4,495, and the existing oil and gas lease provides $960 in rental fees, in annual revenue from Section 36 that goes to Common Schools. If wells are drilled and oil is extracted from state land, the amount of royalties would benefit Common Schools.

EA Checklist Prepared By:	Name:	Date:
	Title:	

V. FINDING

25. ALTERNATIVE SELECTED:

After reviewing the Environmental Assessment, I have selected the Action Alternative, to issue a new seismic permit. 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.

27. NEED FOR FURTHER ENVIRONMENTAL ANALYSIS:

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

EA Checklist Approved By:	Name:	Monte Mason
	Title:	MMB Bureau Chief
Signature: Jeanne Jaypor FOR MONTE MASON	Date:	7/30/15