

CHECKLIST ENVIRONMENTAL ASSESSMENT

Project Name:	Vesta Big Bend 2-D Project, Permit #1550
Proposed Implementation Date:	October 2010
Proponent:	Vesta Oil and Gas, 675 Union Boulevard Suite 208, Lakewood, CO 80228 Contact: R.J. Mowery 307-240-0405
Location:	Section 36-T1N-R19E, Section 36-T1S-R19E, Section 16-T1S-R21E, Sections 2 and 16-T2S-R19E(Common School Trust)
County:	Stillwater

I. TYPE AND PURPOSE OF ACTION

The Proponent has applied to the DNRC for a Seismic Exploration Permit to implement a 2-D seismic project on State land. The proposed project would place, from a motorized vehicle or by foot travel, a 1" receptor cable on the ground for approximately 5.5 linear miles. Associated proposed motorized activities along this route would impact approximately 15 acres of State land.

The proposed method for the seismic exploration would be to use high frequency equipment from a 20-ton large rubber-tired vibrator vehicle. At 440' intervals along the cable, the vehicle would vibrate the ground surface from a 4' x 6' vibrating platform. A data recording truck would record all information from the cable. The cable would then be picked up with the same equipment as it was placed. Surface impacts would result from the vibrating platform and the motorized vehicles on the ground. All activities from cable placement, seismic exploration activities, to cable retrieval would be completed within a two-day period and would temporarily disturb the immediate area for that time span.

Four rubber-tired motorized vehicles would be used for all proposed activities and would consist of rubber-tired ATVs, pick-up trucks, vibrator vehicle, and a truck with equipment to record data. Vehicles would be allowed to access the proposed route off of the existing roads provided the most direct, least erodible route is utilized.

II. PROJECT DEVELOPMENT

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

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

Scoping was performed by contacting Lessee Upper Keyser Creek Ranch Co., Lessee Davey Farms Partnership, Lessee Retamco Operating Inc., Lessee David Saunders, Lessee John Miller, the Montana Natural Heritage Program, and Patrick Rennie, Montana DNRC Archaeologist.

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

The Stillwater County Weed Board administers the State weed laws in Stillwater County.

3. ALTERNATIVES CONSIDERED:

No Action Alternative: The Seismic Exploration Permit would not be granted to Vesta Oil and Gas. Current non-motorized recreational use and grazing leasing would continue.

Action Alternative: A Seismic Exploration Permit would be granted to Vesta Oil and Gas to conduct a 2-D seismic exploration project on State lands in Section 36-T1N-R19E, Section 36-T1S-R19E, Section 16-T1S-R21E, and Sections 2 and 16-T2S-R19E.

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.

Topography is relatively flat to hilly. All motorized vehicle use would be limited to existing roads and cross country by the most direct, least erodible route off of an existing road to place and retrieve the receptor cable, and drive the vibrating vehicle and recording vehicle. The immediate area where the 4' x 6' vibrating weight platform is placed approximately 66 times on the State ground may cause approximately 1600 square feet (.04 acre) of soil compaction. All motorized vehicle use would occur only during dry or frozen soil conditions to minimize any soil erosion, compaction, and rutting. Vehicles would not be allowed to travel on slopes greater than 15%. Any and all disturbed areas would be seeded with a native grass seed mix when soil conditions are appropriate. Minimal soil disturbance would occur as a result these activities, no significant impacts are expected.

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.

The proposed project route crosses two ephemeral streams. All seismic activities are prohibited within 300 feet of surface water, streams, canals, wells, and water pipelines to ensure water resources are protected. No proposed project activities would be allowed between March 1 and July 15 when these streams are most likely to carry water. No significant impacts are anticipated.

6. AIR QUALITY:
What pollutants or particulate would be produced? Identify air quality regulations or zones (e.g. Class I air shed) the project would influence. Identify cumulative effects to air quality.

A short duration increase in pollutants and particulates would occur from machinery during proposed drilling activities. Minimal impacts to air quality are expected.

7. VEGETATION COVER, QUANTITY AND QUALITY:
What changes would the action cause to vegetative communities? Consider rare plants or cover types that would be affected. Identify cumulative effects to vegetation.

Some vegetative disturbance is expected. All motorized vehicle use would be limited to existing roads and cross country by the most direct, least erodible route off of an existing road to place and retrieve the seismic cable, and drive the vibrating vehicle and recording vehicle. The immediate area where the 4' x 6' vibrating weight platform is placed approximately 66 times on the State ground would cause approximately 1600 square feet (.04 acre) of vegetative disturbance. All motorized vehicle use would occur only during dry or frozen soil conditions to minimize soil erosion, compaction, and rutting. All vehicles would be washed, particularly the undercarriage, to assure removal of dirt and plant material and

seeds prior to entering the tracts. Vehicles would not be allowed to drive through woody draws, or areas with any woody or shrubby vegetation present. Any and all disturbed areas would be seeded with a native grass seed mix when conditions are appropriate. Minimal vegetative disturbance, less than a few acres, would occur as a result the proposed project activities; no significant impacts are expected.

8. TERRESTRIAL, AVIAN AND AQUATIC LIFE AND HABITATS:

Consider substantial habitat values and use of the area by wildlife, birds or fish. Identify cumulative effects to fish and wildlife.

A variety of big game, small mammals, raptors, songbirds, and grouse use this area. Proposed project activities could disrupt wildlife movement and patterns. Due to project activities not being allowed between March 1 and July 15, most nesting and calving activities should be completed and not be affected; minimal impacts are anticipated.

9. UNIQUE, ENDANGERED, FRAGILE OR LIMITED ENVIRONMENTAL RESOURCES:

Consider any federally listed threatened or endangered species or habitat identified in the project area. Determine effects to wetlands. Consider Sensitive Species or Species of special concern. Identify cumulative effects to these species and their habitat.

A proposed project area search of the Montana Natural Heritage Program database identified five vertebrate animals listed as a species of concern or threatened species: Bald eagle, Greater sage-grouse, gray wolf, Greater short-horned lizard, and Common sagebrush lizard.

Bald eagles are known to inhabit the proposed project area near the Yellowstone River in Sections 2 and 16-T2S-R19E. No proposed project activities would be allowed between March 1 and July 15 during most of the breeding and nesting season. Due to the timing restriction on proposed project activities, and no known nests within the proposed project area, no significant impacts are anticipated.

Greater sage-grouse are known to inhabit the proposed project area in Section 16-T1S-R21E. No proposed project activities would be allowed between March 1 and July 15 during the breeding and nesting season. Due to this timing restriction on proposed project activities, and the minimal amount of vegetative disturbance that would occur, and the short duration of the actual project activities, minimal impacts are anticipated.

Gray wolves are known to exist approximately ½ mile to the southwest of Section 16-T2S-R19E. Due to no known dens or rendezvous areas in the proposed project area, the timing restriction on activities, and the short duration of the actual project activities, minimal impacts are anticipated.

Greater Short-horned lizards are known to inhabit the proposed project area. No proposed project activities would be allowed between March 1 and July 15 during the lizard's breeding season. Due to the timing restriction on proposed project activities, the relatively minimal amount of vegetative disturbance that would occur during the lizard's nesting period, and the short duration of the actual project activities, minimal impacts are anticipated.

Common sagebrush lizards are known to exist southeast of Section 36-T1S-R19E. Due to the timing restriction on proposed project activities, the relatively minimal amount of sagebrush and vegetative disturbance, and the short duration of the actual project activities, minimal impacts are anticipated.

10. HISTORICAL AND ARCHAEOLOGICAL SITES:

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

The DNRC Archaeologist has no record of cultural resources in the proposed project area and believes seismic exploration activities generally present no real damage to archaeological sites, and as such, has not been recommending cultural inventories for these projects. Should an archaeological or cultural site

be discovered during project activities, all activities would cease until the DNRC Archaeologist can be consulted to determine a proper course of action. No significant impacts are anticipated.

11. AESTHETICS:

Determine if the project is located on a prominent topographic feature, or may be visible from populated or scenic areas. What level of noise, light or visual change would be produced? Identify cumulative effects to aesthetics.

The proposed project area is located in a sparsely populated area with very few residences except for Section 16-T2S-R19E where residences exist within ¼ mile of proposed activities. The level of noise generated would be from the normal large diesel engine that powers the vibrating machine. The vibration would be minimal and should not be felt unless standing near the machine. The hours of operation allowed would be 7:00 am – 6:00 pm. The seismic equipment moves along its route three to four miles each day and the Proponent would not vibrate within 330 ft. of any dwelling or water well. Due to location and short duration of actual proposed project activities, minimal impacts are anticipated.

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.

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.

None.

15. INDUSTRIAL, COMMERCIAL AND AGRICULTURE ACTIVITIES AND PRODUCTION:

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

No impacts are anticipated.

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.

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.

None.

18. DEMAND FOR GOVERNMENT SERVICES:

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

None.

19. LOCALLY ADOPTED ENVIRONMENTAL PLANS AND GOALS:

List State, County, City, USFS, BLM, Tribal, and other zoning or management plans, and identify how they would affect this project.

The DNRC Administrative Rules for State Land Leasing ARM 36.25.101 through 36.25.141.

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.

The proposed project area is currently closed to all motorized access. The proposed project activities would not affect current access, no impacts are anticipated.

21. DENSITY AND DISTRIBUTION OF POPULATION AND HOUSING:

Estimate population changes and additional housing the project would require. Identify cumulative effects to population and housing.

None.

22. SOCIAL STRUCTURES AND MORES:

Identify potential disruption of native or traditional lifestyles or communities.

None.

23. CULTURAL UNIQUENESS AND DIVERSITY:

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

None.

24. OTHER APPROPRIATE SOCIAL AND ECONOMIC CIRCUMSTANCES:

Estimate the return to the trust. Include appropriate economic analysis. Identify potential future uses for the analysis area other than existing management. Identify cumulative economic and social effects likely to occur as a result of the proposed action.

The proposed action has provided \$50 via a Seismic Exploration Permit application fee and would provide one-time rental fee revenue of \$3300 (\$600/mile) to the Trust. The existing grazing leases in the involved sections would continue to provide \$5177.52 annual revenue to the Trust (2010 rates).

EA Checklist Prepared By:	Name: Richard A. Moore	Date: September 15, 2010
	Title: SLO Area Manager	

V. FINDING

25. ALTERNATIVE SELECTED:

After reviewing the Environmental Assessment, I have selected the Action Alternative, to recommend issuance of a Seismic Exploration 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 generating revenue for the common school trust.

26. SIGNIFICANCE OF POTENTIAL IMPACTS:

I conclude all identified potential impacts will be avoided by utilizing the mitigations listed below and no significant impacts will occur as a result of implementing the selected alternative.

Mitigations:

1. Proponent will repair any soil damage and seed any disturbed areas with native grass seed. Proponent will monitor sites and control weeds for a three-year period after activities are completed.
2. Any and all necessary permits will be secured.
3. All seismic activities are prohibited within 300 feet of surface water, canals, wells, and water pipelines to ensure the water resources are protected.
4. All vehicle traffic must stay on established roads except when using most direct, least erodible routes and will be limited to time periods/conditions when use of the road will not create ruts, i.e. frozen conditions or periods when the soil moisture content is below 20 percent.
5. All vehicles must be washed, particularly the undercarriage, to assure removal of dirt and plant material and seeds prior to entering the tracts.
6. It is the responsibility of the Permittee to ensure the company that has been contracted to perform the seismic work under this permit has a valid permit with the county and has registered its bond with the Secretary of State’s Office.
7. Permittee shall contact surface lessee and DNRC Southern Land Office at least 72 hours prior to any seismic activity on State owned lands.
8. No vehicle oil changes or petroleum disposal shall occur on the State land.
9. All gates will be left as found and all fences that are taken down will be repaired promptly.
10. Seismic vehicles will not travel on slopes greater than 15%.
11. Vehicles will not drive through woody draws, or areas with any woody or shrubby vegetation present.
12. Should an archaeological or cultural site be discovered during project activities, all activities shall cease until the DNRC Archaeologist can be consulted to determine a proper course of action. No seismic activities will take place on or across surface archeological features.
13. No project activities will be allowed between March 1 and July 15.
14. Hours of operation will be between 7:00 am – 6:00 pm.
15. No seismic activities allowed within 330 ft. of any dwelling or water well.

27. NEED FOR FURTHER ENVIRONMENTAL ANALYSIS:

EIS

More Detailed EA

No Further Analysis

EA Checklist Approved By:	Name: Jeff Bollman
	Title: DNRC Southern Land Office Planner
Signature:	Date: