

ENVIRONMENTAL ASSESSMENT

Project Name: Seismic Permit #1574 – Pendroy 3D (Fairways Exploration)
Seismic Permit #1576 – Teton 3D (Primary Petroleum)

Proposed Implementation Date: Summer / Fall 2012

Proponent: Fairways Exploration and Production LLC, 13430 Northwest Fwy # 800 Houston, TX 77040

McLauchlin Land Service, Roy McLauchlin, 1545 Gulf Shores Parkway #129, Gulf Shores, AL 36542 (permit agent for Fairways)

Seismic Acquisition Consultants, Inc. Bruce Lindsey, 222 Windmill Oaks Dr. Wimberley, TX 78676 (Seismic Development and Management for Fairways)

GoeKinetics USA, 1500 City West Blvd, Suite 800, Houston, TX 77042 (seismic company)

Primary Petroleum, Suite 800, 744 4th Ave SW, Calgary, AB T2P 3T4

St. Croix Seismic LLC, C/O Leslie Wright, PO Box 464, Park City MT 59063 (permit agent for Primary Petroleum)

LXL Consulting, 602 11th Ave SW, Calgary, Alberta, Canada T2R1J8 (Seismic Development and Management)

Tesla Exploration LTD, 4500 8A Street NE, Calgary, AB, Canada T2P 4J8
Tesla-Conquest, Inc., 6430 S. Fiddlers Green Circle, Suite 100, Greenwood Village, CO. 80111 (seismic company)

Location: **Pendroy 3-D (Fairways Exploration LLC)**

Township 26 North, Range 8 West
Section 1: S $\frac{1}{2}$ NW $\frac{1}{4}$, E $\frac{1}{2}$ SW $\frac{1}{4}$ (Mineral Only)
Section 2: NW $\frac{1}{4}$ SW $\frac{1}{4}$, S $\frac{1}{2}$ SW $\frac{1}{4}$ (Mineral Only)
Section 3: Lot 2, SW $\frac{1}{4}$ NE $\frac{1}{4}$, NW $\frac{1}{4}$ SE $\frac{1}{4}$, NE $\frac{1}{4}$ SW $\frac{1}{4}$
Section 4: Lots 1, 2, SE $\frac{1}{4}$ NW $\frac{1}{4}$
Section 5: Lot 2, S $\frac{1}{2}$ NW $\frac{1}{4}$, SW $\frac{1}{4}$ NE $\frac{1}{4}$
Township 27 North, Range 8 West
Section 15: SW $\frac{1}{4}$ SE $\frac{1}{4}$ (Mineral Only)
Section 16: ALL
Section 22: N $\frac{1}{2}$ NE $\frac{1}{4}$ (Mineral Only)
Section 23: S $\frac{1}{2}$ NW $\frac{1}{4}$, NE $\frac{1}{4}$ NE $\frac{1}{4}$, SW $\frac{1}{4}$ NE $\frac{1}{4}$, N $\frac{1}{2}$ SE $\frac{1}{4}$
Section 33: SW $\frac{1}{4}$ SE $\frac{1}{4}$
Section 35: S $\frac{1}{2}$ N $\frac{1}{2}$ (Mineral Only)
Section 36: ALL (Mineral Only)
Township 28 North, Range 8 West
Section 8: SE $\frac{1}{4}$ SW $\frac{1}{4}$ (Mineral Only)
Section 16: N $\frac{1}{2}$, W $\frac{1}{2}$ SE $\frac{1}{4}$, SW $\frac{1}{4}$
Section 17: SW $\frac{1}{4}$ SW $\frac{1}{4}$
Section 29: NE $\frac{1}{4}$ NE $\frac{1}{4}$ (Mineral Only)
Section 32: NW $\frac{1}{4}$ NW $\frac{1}{4}$ (Mineral Only)

Teton 3-D (Primary Petroleum)

Township 27 North, Range 6 West

Section 7: Lots 2, 3, 4 (Mineral Only)

Section 18: Lots 1, 2, 3, 4, NE $\frac{1}{4}$ SW $\frac{1}{4}$ (Mineral Only)

Section 19: NE $\frac{1}{4}$ NW $\frac{1}{4}$ (Mineral Only)

Township 27 North, Range 7 West

Section 2: S $\frac{1}{2}$ SW $\frac{1}{4}$ (Mineral Only)

Section 3: E $\frac{1}{2}$ SE $\frac{1}{4}$, SW $\frac{1}{4}$ SW $\frac{1}{4}$

Section 4: SE $\frac{1}{4}$ NE $\frac{1}{4}$, E $\frac{1}{2}$ SE $\frac{1}{4}$ (Mineral Only)

Section 7: Lot 2, SE $\frac{1}{4}$ NW $\frac{1}{4}$, N $\frac{1}{2}$ SE $\frac{1}{4}$ (Mineral Only)

Section 8: SW $\frac{1}{4}$ NW $\frac{1}{4}$, S $\frac{1}{2}$ S $\frac{1}{2}$, NW $\frac{1}{4}$ SW $\frac{1}{4}$ (Mineral Only in SW $\frac{1}{4}$ NW $\frac{1}{4}$, NW $\frac{1}{4}$ SW $\frac{1}{4}$)

Section 9: E $\frac{1}{2}$ SE $\frac{1}{4}$ (Mineral Only)

Section 10: SW $\frac{1}{4}$ NW $\frac{1}{4}$, NW $\frac{1}{4}$ SW $\frac{1}{4}$ (Mineral Only in NW $\frac{1}{4}$ SW $\frac{1}{4}$)

Section 13: NW $\frac{1}{4}$ NW $\frac{1}{4}$, SE $\frac{1}{4}$ SE $\frac{1}{4}$, S $\frac{1}{2}$ SW $\frac{1}{4}$ (Mineral Only)

Section 14: NE $\frac{1}{4}$ NE $\frac{1}{4}$, S $\frac{1}{2}$ NE $\frac{1}{4}$, NW $\frac{1}{4}$ SE $\frac{1}{4}$, SE $\frac{1}{4}$ SE $\frac{1}{4}$, NE $\frac{1}{4}$ SW $\frac{1}{4}$, SW $\frac{1}{4}$ SW $\frac{1}{4}$ (Mineral Only)

Section 15: SE $\frac{1}{4}$ NW $\frac{1}{4}$, NW $\frac{1}{4}$ NE $\frac{1}{4}$, SW $\frac{1}{4}$ SE $\frac{1}{4}$, E $\frac{1}{2}$ SW $\frac{1}{4}$ (Mineral Only)

Section 16: ALL

Section 17: S $\frac{1}{2}$ N $\frac{1}{2}$, S $\frac{1}{2}$ SE $\frac{1}{4}$, SW $\frac{1}{4}$ SW $\frac{1}{4}$ (Mineral Only)

Section 18: S $\frac{1}{2}$ NE $\frac{1}{4}$, SE $\frac{1}{4}$ SE $\frac{1}{4}$ (Mineral Only in S $\frac{1}{2}$ NE $\frac{1}{4}$)

Section 19: Lots 3, 4, SE $\frac{1}{4}$ NW $\frac{1}{4}$, N $\frac{1}{2}$ NE $\frac{1}{4}$, SW $\frac{1}{4}$ NE $\frac{1}{4}$, E $\frac{1}{2}$ SW $\frac{1}{4}$

Section 21: E $\frac{1}{2}$ NE $\frac{1}{4}$ (Mineral Only)

Section 22: E $\frac{1}{2}$ NW $\frac{1}{4}$, W $\frac{1}{2}$ NE $\frac{1}{4}$, SE $\frac{1}{4}$ SE $\frac{1}{4}$ (Mineral Only)

Section 23: NW $\frac{1}{4}$ (Mineral Only)

Section 26: SW $\frac{1}{4}$ SW $\frac{1}{4}$

Section 27: SW $\frac{1}{4}$ NW $\frac{1}{4}$, NW $\frac{1}{4}$ SE $\frac{1}{4}$, SE $\frac{1}{4}$ SE $\frac{1}{4}$, NE $\frac{1}{4}$ SW $\frac{1}{4}$, NE $\frac{1}{4}$ NW $\frac{1}{4}$, NW $\frac{1}{4}$ NE $\frac{1}{4}$ (Mineral Only)

Section 28: NE $\frac{1}{4}$ NE $\frac{1}{4}$ (Mineral Only)

Section 29: NE $\frac{1}{4}$ NW $\frac{1}{4}$, S $\frac{1}{2}$ NW $\frac{1}{4}$, NW $\frac{1}{4}$ NE $\frac{1}{4}$, NW $\frac{1}{4}$ SW $\frac{1}{4}$

Section 30: Lot 4 (Mineral Only)

Section 32: S $\frac{1}{2}$ NW $\frac{1}{4}$, NW $\frac{1}{4}$ SE $\frac{1}{4}$, NW $\frac{1}{4}$ SW $\frac{1}{4}$

Section 33: SE $\frac{1}{4}$ NE $\frac{1}{4}$

Section 34: S $\frac{1}{2}$ NW $\frac{1}{4}$ (Mineral Only), N $\frac{1}{2}$ NE $\frac{1}{4}$, SW $\frac{1}{4}$ NE $\frac{1}{4}$

Section 35: NW $\frac{1}{4}$ SW $\frac{1}{4}$, S $\frac{1}{2}$ SW $\frac{1}{4}$

Section 36: N $\frac{1}{2}$ (Mineral Only in NE $\frac{1}{4}$)

Township 27 North, Range 8 West

Section 12: SE $\frac{1}{4}$ NE $\frac{1}{4}$ (Mineral Only)

Section 13: E $\frac{1}{2}$ NW $\frac{1}{4}$, N $\frac{1}{2}$ SW $\frac{1}{4}$, SW $\frac{1}{4}$ SW $\frac{1}{4}$

Section 24: S $\frac{1}{2}$ SE $\frac{1}{4}$

Section 25: NE $\frac{1}{4}$ NE $\frac{1}{4}$, S $\frac{1}{2}$ S $\frac{1}{2}$

Township 28 North, Range 7 West

Section 31: Lot 3

Section 32: SW $\frac{1}{4}$ SE $\frac{1}{4}$

Section 36: S $\frac{1}{2}$ N $\frac{1}{2}$, S $\frac{1}{2}$

County: Pondera and Teton

Trust: Common Schools, Capitol Buildings

I. TYPE AND PURPOSE OF ACTION

Tesla Exploration, Inc on behalf of Primary Petroleum and Geokinetics USA, Inc. on behalf of Fairway Exploration LLC have applied to Montana Department of Natural Resources and Conservation (DNRC), Trust Lands Management Division for authorization to perform 3D seismic operations on State School Trust Lands in western Pondera and Teton Counties. DNRC is reviewing this proposed action on state land under one Environmental Assessment (EA). The two seismic projects will be conducted separately. DNRC minerals account for approximately 9,450 acres of the total seismic operation of 81,960 acres. This EA is intended exclusively for the previously listed state owned lands. The proposed seismic project will likely proceed on private land regardless of DNRC involvement, as DNRC has no authority over activities on private land. The proposed 3D Seismic operation will have 4 phases including: surveying, placement of receiver lines and geophones, generating source points with vibroseis trucks, and project clean up. The two seismic projects will progress across the landscape in a sequential manner under the below described timelines.

Seismic Permit #1574 – Pendroy 3D (Fairways)

July 20 to August 1 - Surveying Only

August 1 to October 1 - Seismic Operations

Seismic Permit #1576 – Teton 3D (Primary Petroleum)

October 25 to December 15

II. PROJECT DEVELOPMENT

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

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

Interested Parties

DNRC TLMD-Surface and Mineral Owners
Montana Wilderness Association
National Wildlife Association
Montana Environmental Information Center
Montana Wildlife Federation
The Wilderness Society
Friends of the Rocky Mountain Front
The Blackfeet Nation
Montana Petroleum Association
Northern Montana Oil & Gas Association
Mountain View Energy Inc
The Nature Conservancy
Pondera County Commissioners
Teton County Commissioners
Montana FWP – Conrad Office
Montana FWP – Region 4 HQ
US Fish and Wildlife Service
Bureau of Land Management – Great Falls
US Forest Service -Rocky Mountain Ranger District
Representative Rob Cook - House District 27
Senator Llew Jones - Senate District 14
Representative Christy Clark - House District 17
Senator Rick Ripley -Senate District 9

Area Land Owners / DNRC Lessee's

Gerald M. Lear, etal
Laura J. Nowlin
Karl Rappold, etal
Colin S. Phipps
Broken O Ranch, LLC
Debra Hocking
Sean S. & William B. Batterson
Bonnie Kaiser
Donald and Barbara Dodge
Kratz Brothers Creature Herds
Wayvan Campbell
Dellwo & Sons, Limited Partners
Gregory Wade Duncan, Etal
Clay R. Crawford Living Trust
The Nature Conservancy - Helena
Bills Ranch Co
John Harold Stuker, etal
Donald Reishus, etal
James F. Lear, etal
Raymond & Lorna Lindseth
3 Jay LLC
Philip & Peggy Johnson
Bruce & Lindsey Martin
Virgil R. Pedersen, etal
Daryl & Pamela Swanson
The New and Improved Hager Ranch, LLC
Wayne & Ida Denise Agee
Nancy Pearson, etal
Duard S. Dellwo as custodian for Shane & Chase Dellwo
Double K. Land & Cattle Co
Margaret E. Manix Dernovich, etal
Boone & Crockett Club Inc.
Daniel & Hootie Dodge
K C K Ranch A MT Partnership
Arrows Inc. A Montana Partnership
Thomas & Carolyn Salasky
Wayvan Campbell Testamentary Trust
James and Frederick McDowell
Rockport Colony
Campbell Brothers, LLC
Patrick and Christopher Field
Dunstan Living Trust

Public Scoping notice published in the Choteau Acantha May 30, 2012 and June 6, 2012.

Public Scoping notice published in the Independent Observer May 31, 2012 and June 7, 2012.

Public Scoping notice published in the Great Falls Tribune May 27, 2012 and June 3, 2012.

Public Scoping notice published in the Helena Independent Record May 27, 2012 and June 3, 2012.

Public Scoping notice published in the Missoulian May 27, 2012 and June 3, 2012.

DNRC held a public meeting to accept comments regarding the two proposed seismic operations on June 20, 2012, 7:00 p.m., Stage Stop Inn Conference Room, 1005 North Main, Choteau, Montana. Approximately 30 people attended.

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

The DNRC Trust Land Management Division and Minerals Management Bureau has jurisdiction over state owned school trust lands. County permit and proof of qualification to conduct business in the State of Montana is also required.

DNRC is not aware of any other agencies with jurisdiction or other permits needed to complete this project

3. ALTERNATIVES CONSIDERED:

Alternative A (No Action) – Deny permission to conduct 3D seismic survey on state land.

Alternative B (the Proposed action) – Grant permission to conduct the 3D seismic survey on state land using the DNRC-TLMD mitigation measures to minimize adverse environmental impacts.

III. IMPACTS ON THE PHYSICAL ENVIRONMENT
<ul style="list-style-type: none">• <i>RESOURCES potentially impacted are listed on the form, followed by common issues that would be considered.</i>• <i>Explain POTENTIAL IMPACTS AND MITIGATIONS following each resource heading.</i>• <i>Enter "NONE" If no impacts are identified or the resource is not present.</i>

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.

Surface geology in the majority of the seismic proposal consists of Pleistocene glacial deposits of drift and a heterogeneous mixture of rock fragments in a silty clay matrix as well as coarse stream laid gravel. The Two Medicine Formation is an Upper Cretaceous formation exposed throughout the project area in 27N-7W and 27N-8W that is characterized by gray green and gray mudstone with red and purple interbeds. In the northern end of the seismic project, predominant surface geology consists of an equal mixture of the Two Medicine Formation, alluvial deposits of braided streams, and glacial till deposited by the continental ice sheet evident by the abundance of pebbles and boulders.

The eastern edge of the thrust fault cuts across the southwestern border of the Fairways project. Nearest oil fields with significant oil production include the Gypsy Basin and Bills Coulee fields which are located in the northeast corner of the Teton 3D seismic shoot area. The Gypsy Basin Field is primarily an oil field which relies on a faulted anticlinal fold and some stratigraphic pinchouts acting as the trapping mechanisms and has produced over 207,000 barrels of oil. Bills Coulee Field is a gas field which relies solely on a stratigraphic trap and has produced over 2 billion cubic feet of gas.

The soils within the proposed project area vary greatly. They include silty, dense clays, saline lowlands, shallow, shallow gravel, sub-irrigated, and overland flow areas. The terrain is also varied from flat to rolling hills to steep timbered slopes, intersected by intermittent brush filled coulees and riparian areas. Soils throughout the project area contain a glacial till substrate and are well vegetated with native range land vegetation and very stable. Wet areas, wet coulee bottoms, and riparian areas on state lands will be avoided by all mechanized equipment seismic operations. The proposed action may cause minimal localized areas of soil erosion and compaction from the manipulation of vehicles and equipment on the surface. Soil types throughout the area have a high potential to recover functional and structural integrity after disturbance. The proposed seismic project work may only be done when the topsoil is dry to minimize soil erosion and compaction. The proposed action will temporarily disturb a small portion of the landscape. Any impacts to the soil are expected to be minor and temporary because no physical ground disturbing activities are expected. Standard special stipulations including no vehicle operation during wet or muddy conditions, no mechanized equipment on slopes greater than 25%, and no seismic testing in wet zones, will minimize any impacts to soils resources. No cumulative effects to the soils are anticipated.

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.

There are several documented and/or recorded water rights associated with the proposed project areas. There are also several springs and reservoirs in the proposed project areas. The project area contains the following riparian areas: South Fork Dry Fork Marias River, Middle Fork Dry Fork Marias River, Ben English Coulee, Jensen Coulee, Hay Coulee, Toms Coulee, Woods Coulee. The proponent will be required by the standard special stipulations to stay 300 feet from springs, water wells, streams, lakes, or water storage reservoir facilities while conducting vibroseis operations on state land. Riparian areas will be walk in only and the crossing of these areas with motorized equipment is not permitted. Equipment operations, including ATVs, UTVs, pick-ups and fibroses trucks will be prohibited within all riparian areas or wet areas. Riparian areas will be identified in pre-meeting with the seismic operations management and the Conrad Unit Office. However, should unidentified riparian areas be encountered during the seismic operations, it is the Permittee's responsibility to avoid such areas. No shot hole drilling or blasting operations are planned or authorized for this project.

3D seismic operations, if conducted according to the permit terms and conditions, will not have adverse impact on surface water, groundwater, water quantity, or quality. No negative cumulative impacts to water resources are expected.

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.

The proposed seismic project will not consist of any disturbance to soils, so no cumulative effects to air quality are anticipated.

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.

This project is situated in the foothills along the Rocky Mountain Front (Mountain and Foothills 14-19' precipitation zone). The vegetation within the proposed project area consists of limber pine / native grassland savanna on the west side of the project area and native grasslands on the east side. Limited areas of dense shrub / tree thickets (willows, aspen, bog birch) also exist within the project area. Native rangeland vegetation is dominated by silty range sites with rough fescue, Idaho fescue, blue bunch wheatgrass, green needle grass, western wheatgrass, prairie june grass, sedges, and shrubby cinquefoil being the major species.

The project area is relatively free of noxious weeds. Small patches and individual plants of Canada thistle and hounds tongue are the only identified noxious weeds present on state lands. Introduction of new noxious weeds and the spread of existing noxious weeds is a concern and has been brought up in the public comment process. This concern will be mitigated by initially power washing all equipment prior to entering the project area, washing equipment at regular intervals during the project, briefing crews for identification of noxious weeds, and avoidance of known infestations. DNRC will require a pre-inspection of all equipment prior to starting the seismic project. The proponent is currently working with the appropriate County Weed Coordinator and the Rocky Mountain Front Weed Round Table on additional best management practices for this project. Long term mitigating noxious weed issues that may arise as a result of this project are the responsibility of the Oil and Gas lessee.

ATV, UTV, foot traffic and vibroseis trucks will temporarily flatten native vegetation along source and receiver lines. No ground disturbing actions are planned or authorized. Helicopters will be utilized to move equipment within the project area which will reduce traffic, thus lessening the impact to vegetation. Trampled vegetation is expected to recover quickly and naturally. The aspen stands and/or other woodland thickets, woody draws, riparian areas, and other wet coulees on state land will be avoided. As a practical matter, mechanized equipment generally avoids wetland and riparian areas, regardless of land ownership. The vegetation along the proposed seismic routes will be minimally impacted. Restricting the vibroseis and vehicle activity to only dry conditions will

minimize any impacts to the existing vegetation. No long term or cumulative impacts to the existing vegetation are expected.

A review of Natural Heritage data through the NRIS was conducted and there were no plant species of concern noted or potential species of concern noted on the NRIS survey.

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.

Wildlife analysis was completed by DNRC staff Wildlife Biologist Garrett Schairer. This analysis is found in attachment B.

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.

Endangered species analysis was completed by DNRC staff Wildlife Biologist Garrett Schairer. This analysis is found in attachment B.

10. HISTORICAL AND ARCHAEOLOGICAL SITES:

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

A review of previous field evaluations and TLMS indicates 2 historical sites have been identified on state land.

1. Site Lead – Sec 32, T27N, R7W - dinosaur bone fragments in deflated surfaces in the NW¼
2. Site 24PN107 – Sec 36 T28N, R7W – Site consists of 6 stone circles widely scattered along a ridge overlooking Jensen coulee in the NW¼SE¼.

Seismic work conducted when the ground is dry or frozen has little potential to adversely affect heritage properties. As such, the DNRC is not requiring that an inventory of cultural resources be conducted prior to seismic work on state land. However, within the area of potential effect, one stone circle site has been formally documented (24PN107). The boundaries of the cultural property will be flagged and avoided by seismic exploration work as a precautionary measure.

The proponent will be required by the special stipulations to avoid and report any historical, archeological, and paleontological resources encountered in the project area as well to conduct seismic activities only during dry conditions.

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.

During seismic operations, a variety of vehicles, including ATVs, UTVs pickups, large vibroseis trucks, and a helicopter will be seen and heard by people in the vicinity of the operations. Seismic operations will be temporary and occur over a 4½ month period. No long term effects to the aesthetics of this area will occur.

The state land is located between 1 and 15 miles east of Rocky Mountain Front topography and therefore provides some scenic opportunities from a distance. This scenic opportunity is abundantly available to the north or south of the seismic project area from the existing highway. The proposed activity will be temporary and no long term changes to the aesthetics values of the area will occur.

No direct or cumulative effects to aesthetics 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.

The demand on environmental resources such as land, water, air, or energy will not be affected by the proposed action. The proposed action will not consume resources that are limited in the area. There are no other projects in the area that will affect the proposed project.

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.

There are no other projects or plans being considered on the tracts listed on this EA or in the immediate area around the state lands involved.

<p style="text-align: center;">IV. IMPACTS ON THE HUMAN POPULATION</p>

- | |
|--|
| <ul style="list-style-type: none">• <i>RESOURCES potentially impacted are listed on the form, followed by common issues that would be considered.</i>• <i>Explain POTENTIAL IMPACTS AND MITIGATIONS following each resource heading.</i>• <i>Enter "NONE" if no impacts are identified or the resource is not present.</i> |
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14. HUMAN HEALTH AND SAFETY:

Identify any health and safety risks posed by the project.

The project area is in the occupied grizzly bear zone. Several grizzly bears may be present in the area during the Pendroy 3D project. The proponent is coordinating with Montana FWP and wildlife consultants on briefing crews at safety meetings on bear awareness. All seismic operations and associated activities will be prohibited within a 1/8 mile buffers around aspen stands and other woody thickets. Seismic operations on the Pendroy 3D project will only occur during daytime (light) hours. This will limit nighttime grizzly bear encounters. Seismic operations on the Teton 3D project will occur after grizzly bears are denned for the winter months and such grizzly bear encounter are very unlikely.

There will be some health and safety concerns associated with the operation of seismic equipment in more remote areas. The proponent and their employees will be briefed through safety meetings and therefore will be aware of safe operating practices for the area. Employees are also trained and familiar with safe operating practices for the equipment they are operating and accept any health and safety risks as normal occupational hazards.

Once the survey has been completed, there will be no health and safety concerns associated with this project.

15. INDUSTRIAL, COMMERCIAL AND AGRICULTURE ACTIVITIES AND PRODUCTION:

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

The local economy (motels, restaurants, ect.) will benefit from this project. The applicants will pay surface lessees for any actual damages that occur to lease holder interests. Temporary inconveniences to local ranches are expected during the seismic project. However, the proposed seismic project is short-term and will not change the current use of the landscape in the area. Land classification will remain as agricultural and grazing following the project. This proposed seismic exploration project may increase or decrease the possibility of oil and gas drilling and development in the area. Any new activities that may be proposed on state land will be subject to additional MEPA review.

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.

50-100 company employees will be brought in to complete the seismic project. These positions are already held by employees of the proponent. Local subcontractors will also be used as needed on the project.

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.

The seismic project will temporarily increase the tax base or tax revenues through payroll taxes and vehicle registrations. No other long term impacts to tax base or tax revenues are expected.

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

There will be a temporary increase in local traffic if this project is approved, but the traffic levels will return to normal, "pre-action", levels once the project is completed. Wildfire is a potential concern with equipment operating in grasslands during summer months. The applicant will have fire extinguishers on equipment and have other firefighting equipment onsite in case of a fire. Local fire departments will be notified of this project. The applicant may be responsible for all suppression costs and resource damage associated with a wildfire started by seismic operations.

There will be no other direct or cumulative effects on government services.

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 1987 "Interagency Rocky Mountain Front Wildlife Monitoring / Evaluation Program" document concludes that "activities related to one phase (seismic exploration) of oil and gas development have great potential for detrimental effects to habitat and species in the identified area." However, DFWP's July 12, 2011 comment letter pertaining to a previous project advises that "if this company can minimize impacts to a level that habitat and species recovery from the disturbance can occur in a short time frame, both the industry, public, wildlife and habitat will benefit. With new techniques, equipment and knowledge both the industry side and the natural resources side there should be ways to accomplish this." This statement is consistent with the Bureau of Land Management's 2006 Analysis Report and determination that the impacts from geophysical exploration were usually short term and do not contribute to significant cumulative impacts, and as a result, were eligible for a categorical exclusion status under NEPA. This document's description of seismic exploration is particularly instructive:

"Today's energy development is dependent upon geophysical exploration to maximize recovery potential while minimizing the number of necessary platforms and wells. Seismic operations that occurred on public lands twenty plus years ago often involved road building and heavy truck mounted drill rigs. This type of exploration had much greater environmental impacts on the landscape than the exploration occurring today. Most modern geophysical exploration involves low impact and state-of-the-art techniques that minimize surface disturbance. The seismic operations BLM authorizes today are typically conducted by vibroseis trucks or small portable drill rigs transported by either off-road vehicles with low pressure tires, or helicopter. Thus, the traditional work camps and bulldozers that accompany heavy equipment have been abandoned and the seismic crews greatly reduced in size. Using best management practices such as seasonal restrictions, equipment restrictions and other mitigation measures are employed, operators are able to minimize the impacts associated with modern seismic operations."

As discussed in the proposed action, this seismic project proposal would utilize vibroseis technology. No road or pad construction, no dynamite shot-holes, and no work-camps would be required. The entire seismic operations consisting of two (2) separate projects should be completed in less than 4½ months.

Five (5) tracts, totaling 640 acres, of split estate DNRC - state land surface / federal withdrawn mineral (BLM) are present in the project area. The owner of the mineral estate must directly convey the legal right to conduct oil & gas exploration on their behalf and for their benefit. The federal government has withdrawn their mineral estate from oil & gas leasing, exploration & operations, and has not conveyed that property right to the seismic company. As the surface owner, DNRC does not have the right to authorize seismic operations on these split estate tracts and therefore they will be avoided.

The proponent must obtain a seismic permit from Pondera and Teton Counties. The proposed action is in compliance with State and County laws. No other management plans are in effect for the area.

20. ACCESS TO AND QUALITY OF RECREATIONAL AND WILDERNESS ACTIVITIES:

Identify any wilderness or recreational areas nearby or access routes through this tract. Determine the effects of the project on recreational potential within the tract. Identify cumulative effects to recreational and wilderness activities.

The Bob Marshall Wilderness boundary is approximately 3 miles west of the project area. The Wilderness is located within the Lewis and Clark National Forest whose boundary is in close proximity to the seismic project. In 2006 Federal Legislation withdrew lands in the Lewis and Clark National Forest and adjacent Bureau of Land Management Lands along the Rocky Mountain Front from future oil and gas leasing. This area is known as the Baucus withdrawal. There are 3,800 acres of state DNRC mineral ownership located within the Baucus withdrawal area. In response to the Baucus Withdrawal legislation and in recognition of the resource values within the withdrawal area, DNRC places a special restrictive stipulation on state oil and gas leases which are located within the withdrawal area boundary. The Baucus withdrawal area oil and gas lease stipulations were specifically developed for state school trust lands in the withdrawal area. It recognizes the resource values associated with lands east of the Rocky Mountain Front. The stipulations focused on the potential long-term impacts that may be possible from well drilling and development. The stipulations were developed with substantial input from wildlife interest groups. The result was stipulations that allowed for the responsible leasing of state school trust lands in the withdrawal area. DNRC followed the all guidance and recommendations outline in the Rocky Mountain front special stipulations.

The seismic operations will overlap with parts of the big game (antelope, elk and deer) and upland bird hunting season. Seismic activities may cause temporary displacement of wildlife and limit successful hunting on state land during the general hunting season. The project area is a mixture of private and state land, where private lands are the majority of the land ownership and are not open to public hunting with out permission. Although 5,640 acres of state land surface ownership are within the project, state ownership is generally scattered and larger blocks of public ownership are not present. Other general recreational use such as hiking and fishing is not expected to be impacted. The proposed action is not expected to impact general recreational activities on the state tracts in the long-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

The proposal does not include any changes to housing or developments. No direct or cumulative effects to population or housing are anticipated.

22. SOCIAL STRUCTURES AND MORES:

Identify potential disruption of native or traditional lifestyles or communities.

There are no native, unique or traditional lifestyles or communities in the vicinity that would be impacted by the proposal.

23. CULTURAL UNIQUENESS AND DIVERSITY:

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

The proposed action will not impact the cultural uniqueness or diversity of the area.

24. OTHER APPROPRIATE SOCIAL AND ECONOMIC CIRCUMSTANCES:

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

DNRC has completed extensive public scoping and received 10 written comments and 4 verbal comments from the June 20th public meeting. Attachment C contains the comments letters and emails and DNRC response.

The base seismic permit and proposed special stipulations for each project are included in attachment A.

EA Prepared By:	Name: Erik Eneboe	Date: July 2, 2012
	Title: Conrad Unit Manager, CLO, DNRC	

V. FINDING

25. ALTERNATIVE SELECTED:

I have selected Alternative B which would grant the proponents authority to conduct a 3-D seismic survey on state lands located within the project area.

26. SIGNIFICANCE OF POTENTIAL IMPACTS:

Significant impacts are not expected to occur as a result of the proposed activity on state lands. The intent of the proposed activity is to collect geophysical data in the project area. 3-D seismic operations are a very common method to collect sub-surface data in a manner which results in very little surface disturbance. The state lands represent less than 12% of the over project area and conducting activities on the state land will result little additional impacts which would likely occur with or without participation by the state. Normal farming and ranching activities are conducted in the project area on a regular basis throughout the seasons. Seismic surveys necessarily results in a substantially greater amount of human activity than would normally occur which may temporarily displace some wildlife species. However, disturbance to wildlife species as a result of this decision is expected to be of limited duration and extent given the small size of the DNRC-managed parcels and the intermingled ownership with private lands where seismic activities will also occur. Mitigation measures which are common and effective have been incorporated in the proposal to minimize the potential for environment impact and any impacts associated with this proposal on state lands are expected to be minor and short term.

27. NEED FOR FURTHER ENVIRONMENTAL ANALYSIS:

The environmental analysis for this project is appropriate and additional analysis is not needed.

EA Approved By:	Name: Garry Williams Title: Area Manager, CLO, DNRC
Signature:	
	Date: 7/3/2012

Attachment A
Permit and Stipulations

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ATTACHMENT A

SUBMIT IN DUPLICATE

PERMIT # _____

**SEISMIC EXPLORATION PERMIT FOR OIL AND GAS
FOR LANDS OWNED BY THE STATE OF MONTANA**

In consideration for the payment of Fifty Dollars (\$50.00) and other charges, the State of Montana hereby grants to _____ of _____ permission to prospect for oil and gas by geological and geophysical methods on lands described below:

Legal Description of lands:

The permission hereby granted is subject to the conditions specified below:

1. The duration of this agreement and the permission hereby granted is limited to one calendar year from the date of execution of the agreement by the Department of Natural Resources and Conservation.
2. Within 6 months after termination of this permit, the permittee shall submit to the Department of Natural Resources and Conservation an affidavit setting out the nature of the tests conducted, a narrative description or map showing the number and location of sites where tests were conducted, and the location and depth of any geologic formations which may be capable of producing water in useable quantities that are discovered in testing. The submission of a driller's log shall satisfy the geologic reporting requirement of this paragraph.
3. This permit does not grant any rights to an oil and gas lease on the land included hereunder or any interests of any kind in such land. The State of Montana expressly reserves the right to use, lease, sell or otherwise dispose of the minerals and the surface of the lands covered hereby.
4. Exploration operations shall be conducted in compliance with all federal, state and local laws, ordinances, rules and regulations which are applicable to such operations. Particularly, permittee agrees to comply with the oil and gas rules on state lands and the bonding requirement of 82-1-104, MCA, before commencing operations hereunder and agrees to comply with the Board of Oil and Gas Conservation rules on seismic activities. Also, the permittee shall comply with any oil and gas lease stipulations which apply to the land.
5. The permittee shall confine all surface activity to improved roads during periods when the land surface is wet or is in such a condition that it may be damaged from travel by heavy vehicles or trucks. During all other periods, the permittee shall confine all activity which may disturb the surface to existing trails and terrain which is easily accessible to normal four-wheel drive travel without winching or other artificial means. The permittee shall not conduct any type of road construction activity, including but not limited to, blading and dozing existing roads and trails, constructing stream crossings, removal of brush and trees without the written permission of the Department of Natural Resources and Conservation. The department shall grant such permission only after the permittee has submitted evidence of unusual conditions which require such road construction and a plan for the road construction which protects the land surface to the greatest extent possible. The department may impose requirements on such construction in order to protect the land surface from erosion or other damage.
6. In all operations on the lands covered hereby, the permittee shall interfere as little as practicable with the use of the premises for any other purpose to which the same may be devoted by other person or persons to whom such lands may have been leased or sold by the state. All necessary precautions shall be taken to avoid any damage other than normal wear and tear to gates, bridges, roads, cattle guards, fences, dams and other improvements. The permittee shall make satisfactory adjustment of any damages sustained by the owner or lessee of the surface of the lands, in connection with the operations by the permittee hereunder. The permittee shall maintain records of amounts paid to surface owners or lessees in settlement of damages. The permittee shall make the records available upon request. The permittee must obtain appropriate permission to use water which may be necessary for its operation.

7. The permittee shall not conduct any type of geophysical testing and measuring which will disturb the surface or move the earth within 300 feet of any springs, water wells, streams, lakes or water storage reservoir facilities, and shall not conduct any drilling or blasting activities within 1320 feet of springs, water wells, buildings or structures or within 660 feet of any reservoir dam, unless written departmental approval is received. The Department of Natural Resources and Conservation may impose further restrictions when the particular situation warrants other precautions.

8. If an artesian water flow is encountered in any of the drill holes located on state land, the department shall be notified immediately so that a decision can be made as to whether the well will be developed. If the well is not developed, or if damage is occurring or is imminent, it will be the operator's responsibility to plug the hole in order to contain the water to its native strata.

9. The permittee shall plug all seismic holes as soon as practicable and in no event shall they remain unplugged for more than 120 days. The permittee shall notify the department in writing of its intent to plug and abandon including the date such activities are intended to commence, the location of the holes and the name and telephone number of the person in charge. The plugging shall be conducted in accordance with the Board of Oil and Gas Conservation rules and all cuttings shall be spread out to a depth not exceeding one inch.

10. The permittee shall be responsible for leaving the above described land in as nearly the same condition as it was prior to the effective date of this permit, as is possible. All refuse, including but not limited to, oil cans, shot wire, powder boxes, flagging, etc., will be removed from the lands and properly disposed of. This provision applies in addition to any damages the permittee may have paid or may be liable to pay the owner or lessee of the above described land.

11. The operator shall take such measures, for the prevention and suppression of fire on the permit area and other adjacent lands used or traversed by the operator, as are required by applicable laws and regulations. However, when in the opinion of the department, weather and other conditions affecting fire incidence and control make special precautions necessary to protect the subject area, the operator shall take such additional or other fire prevention and control measures as may be required by the department.

12. For violation of any of the above provisions, the Department of Natural Resources and Conservation may cancel the permission hereby granted. Such cancellation is not a waiver of other remedies available to the state hereunder.

13. The permittee has filed a bond with the Department of Natural Resources and Conservation in the penal sum of \$10,000, conditioned upon compliance with all permit terms, conditions, provisions, stipulations and requirements. Additional bonds may be required at any time during the period of the permit.

14. Special conditions:

See Attachment A

Dated: _____

For the Director of the Department of Natural Resources and Conservation

Permittee

By _____

Date _____

ATTACHMENT A-1: PENDROY 3D (Fairways Exploration)

1. The permittee shall contact and meet with the Conrad Unit Staff prior to commencing any surface activity on state lands.

Erik Eneboe, Conrad Unit Manager,
P O Box 961 Conrad, MT 59425 PH (406)278-7869 or (406)788-7074.

2. The permittee shall be responsible for controlling any noxious weeds introduced by permittee's activity on state owned land and shall prevent or eradicate the spread of those noxious weeds onto land adjoining the leased premises by implementing the below measures:
 - a. Obtain information on noxious weed issues and management in the area from the appropriate County and the Rocky Mountain Front Weed Round Table.
 - b. Implement best management practices that prevent the spread of noxious weeds.
 - c. Power wash all equipment (vehicles, ATVs, command center, etc.) prior to entering the project area. DNRC will inspect equipment at a defined staging area prior to commencing the project.
 - d. Provide crew training and briefings on noxious weed identification.
 - e. Avoid areas infested with noxious weeds.
3. Seismic operations on state-owned minerals may occur only from July 20 through October 1. July 20 to August 1 will be authorized for survey only. All other seismic operations will be authorized starting August 1.
4. The permit will not allow for 24 hour seismic operations. Seismic operations must be completed in day light hours only.
5. All stages of the project including removal of all receiver lines, staking, equipment and reclamation, if needed, shall be completed by October 1.
6. To minimize the extent of displacement of various wildlife species associated with project-related disturbances, conduct ground activities to the extent possible in a sequential vs. a concurrent manner.
7. To minimize risk of disturbance and displacement of grizzly bears and surprise bear encounters, all ground activities are prohibited within 1/8 mile of aspen stands and/or dense brushy areas. No activities including ATV and foot travel into dense, brushy portions of the state land survey area are authorized.
8. To minimize risk of disturbance and displacement of grizzly bears, aerial helicopter flights within 1/4 mile of brushy areas and/or dense aspen stands are prohibited.
9. For human safety, brief staff conducting ground activities on working safely in bear habitat and train in the effective use of bear spray.
10. For human safety while working in occupied grizzly bear habitat, ground crews are required to carry bear spray.
11. To minimize risk of bear habituation and human/bear encounters, any bear attractants, including food and garbage are to be stored in a bear resistant manner at all times when unattended.

12. To minimize risk of bear habituation and human/bear encounters, on-site camping within the project area is not permitted.
13. To minimize potential for disturbance and adverse impacts to important bear foods and feeding areas, all use of vehicles, ATVs and ground crews are not authorized in wetlands and riparian areas on state lands.
14. The seismic project area contains several springs, wells, reservoirs, creeks and other surface / subsurface water features. The permittee shall pay particular attention to and follow the standard set backs outlined in condition #7 on the seismic permit.
15. No seismic activity will occur within woody draws, wet areas, and/or riparian areas on state lands. Permittee shall minimize impacts to woody vegetation.
16. Crossing riparian areas and/or other wet areas with equipment such as ATVs, UTVs, trucks or vibe trucks is not authorized. Riparian areas may be crossed by foot traffic only.
17. This tract may contain significant archaeological, historic, or paleontologic resources. If any of these resources are located within the direct route of the proposed seismic lines, the permittee shall cease all activity and contact the field Unit Office and the Department Archaeologist in Helena immediately.
18. It is the responsibility of the permittee to make sure that the seismic company that has been contracted to do the seismic work under this permit has a valid permit with the appropriate counties and has registered their bond with the Secretary of State's office.
19. Permittee shall contact surface lessee 48 hours prior to any seismic activity on state-owned lands.
20. Seismic activity may occur on dry ground only. No activity will be allowed during muddy conditions or conditions where rutting will occur.
21. No vehicle oil changes or petroleum disposal shall occur on the state land. All seismic vehicles will contain suitable fire extinguishers. No open burning will be allowed on state land.
22. There will be no off road traffic other than that necessary to accomplish the seismographic goals. Vehicles, ATVs, and UTVs will not be allowed to traverse steep slopes greater than 25%, areas with very thin soils that may be rutted and left open to erosion. All receiver lines that will be placed on steep slopes (>25%) shall be completed by hand crews.
23. The permittee is not authorized to plow snow on state land within the project area.
24. All gates will be closed and all fences that are taken down will be repaired as soon as possible. All flagging tape will be removed from the roads and fences leading into the site, along designated routes, and fence lines indicating where gates are located, once the project is completed.
25. All flagging will be removed from the roads and fences leading into the site, along designated routes, and fence lines indicating where gates are located, once the project is completed.
26. Permittee shall settle all damages with the surface lessee within a reasonable time period following the completion of the seismic project.

ATTACHMENT A-2: TETON 3D (Primary Petroleum)

1. The permittee shall contact and meet with the Conrad Unit Staff prior to commencing any surface activity on state lands.

Erik Eneboe, Conrad Unit Manager,
P O Box 961 Conrad, MT 59425 PH (406)278-7869 or (406)788-7074.

2. The permittee shall be responsible for controlling any noxious weeds introduced by permittee's activity on state owned land and shall prevent or eradicate the spread of those noxious weeds onto land adjoining the leased premises by implementing the below measures:
 - a. Obtain information on noxious weed issues and management in the area from the appropriate County and the Rocky Mountain Front Weed Round Table.
 - b. Implement best management practices that prevent the spread of noxious weeds.
 - c. Power wash all equipment (vehicles, ATVs, command center, etc.) prior to entering the project area. DNRC will inspect equipment at a defined staging area prior to commencing the
 - d. Provide crew training and briefings on noxious weed identification.
 - e. Avoid areas infested with noxious weeds.
3. Seismic operation on state-owned minerals may occur only October 25 through December 15. The permit will allow for 24 hour seismic operations. All stages of the project including removal of all receiver lines, staking, equipment and reclamation, if needed, shall be completed by December 15.
4. To minimize the extent of displacement associated with project-related disturbances, conduct ground activities to the extent possible in a sequential vs. a concurrent manner.
5. To minimize risk of disturbance and displacement of grizzly bears and surprise bear encounters, all ground activities are prohibited within 1/8 mile of dense brushy areas and/or aspen stands. No activities including ATV and foot travel into dense, brushy portions of the state land survey area are authorized.
6. To minimize risk of disturbance and displacement of grizzly bears, aerial helicopter flights within 1/4 mile of brushy areas are prohibited.
7. For human safety, brief staff conducting ground activities on working safely in bear habitat and train in the effective use of bear spray.
8. For human safety while working in occupied grizzly bear habitat, ground crews are required to carry bear spray.
9. To minimize risk of bear habituation and human/bear encounters, any bear attractants, including food and garbage are to be stored in a bear resistant manner at all times when unattended.
10. To minimize risk of bear habituation and human/bear encounters, on-site camping within the project area is not permitted.
11. To minimize risk of surprise bear encounters, cross country foot travel on state land by ground crews in nighttime hours between 9:30 pm and 7:30 am is prohibited. Crew members should remain in or near trucks during night time shifts.

12. To minimize potential for disturbance and adverse impacts to important bear foods and feeding areas, all use of vehicles, ATVs and ground crews are not authorized in a 100 feet of wetlands and riparian areas on or adjacent to state lands.
13. The seismic project area contains several springs, wells, reservoirs, creeks and other surface / subsurface water features. The permittee shall pay particular attention to and follow the standard set backs outlined in condition #7 on the seismic permit.
14. No seismic activity will occur within 100 feet of woody draws on or adjacent to state lands. Permittee shall minimize impacts to woody vegetation.
15. This tract may contain significant archaeological, historic, or paleontologic resources. If any of these resources are located within the direct route of the proposed seismic lines, the permittee shall cease all activity and contact the field Unit Office and the Department Archaeologist in Helena immediately.
16. Crossing riparian areas and/or other wet areas with equipment such as ATVs, UTVs, trucks or vibroseis trucks is not authorized. Riparian areas may be crossed by foot traffic only.
17. It is the responsibility of the permittee to make sure that the seismic company that has been contracted to do the seismic work under this permit has a valid permit with the appropriate counties and has registered their bond with the Secretary of State's office.
18. Permittee shall contact surface lessee 48 hours prior to any seismic activity on state-owned lands.
19. Seismic activity may occur on dry ground only. No activity will be allowed during muddy conditions or conditions where rutting will occur.
20. No vehicle oil changes or petroleum disposal shall occur on the state land. All seismic vehicles will contain suitable fire extinguishers. No open burning will be allowed on state land.
21. There will be no off road traffic other than that necessary to accomplish the seismographic goals. Vehicles, ATVs and UTVs will not be allowed to traverse steep slopes greater than 25%, areas with very thin soils that may be rutted and left open to erosion. All receiver lines that will be placed on steep slopes (>25%) shall be completed by hand crews.
22. The permittee is not authorized to plow snow on state land within the project area.
23. All gates will be closed and all fences that are taken down will be repaired as soon as possible. All flagging tape will be removed from the roads and fences leading into the site, along designated routes, and fence lines indicating where gates are located, once the project is completed.
24. All flagging will be removed from the roads and fences leading into the site, along designated routes, and fence lines indicating where gates are located, once the project is completed.
25. Permittee shall settle all damages with the surface lessee within a reasonable time period following the completion of the seismic project.

Attachment B
Wildlife Analysis

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ATTACHMENT B

Wildlife Analysis-Pendroy/Teton 3D Seismic Proposals

This analysis is designed to disclose the existing condition of the wildlife resources and the anticipated direct, indirect, and cumulative effects that may result from implementing either the No-Action Alternative or the Action Alternative, as described. The following issue statements were developed from comments received during initial scoping:

- The proposed seismic activities could increase disturbance to wildlife in the vicinity, which could alter wildlife use of the area.
- The proposed seismic activities could: 1) disturb or displace grizzly bears from preferred feeding areas during important nutritional periods; 2) adversely affect grizzly bear habitat resulting in lower suitability and quality; 3) increase the potential for bear/human encounters; and 4) introduce unnatural food sources or other attractants which could lead to the removal of problem bears.
- The proposed seismic activities could disturb or displace grassland nesting birds and/or adversely affect suitability and quality of nesting habitats.
- The proposed seismic activities could: 1) disturb or displace big game species from important wintering areas during the winter period; 2) disturb or displace big game species from calving/fawning areas in the spring calving/fawning period; and 3) disrupt recreational hunting activities.
- The proposed seismic activities could adversely affect sensitive wetland communities and riparian habitats which could affect the associated aquatic species that may occur in the project area.

Introduction

The project area lies southwest of Dupuyer, Montana and is comprised of 9,450 acres of DNRC-managed state trust lands. Seismic exploration activities are also planned to occur on neighboring private lands totaling approximately 81,960 acres in 2012. Activities would occur on nearby private lands regardless of DNRC's decision to authorize similar activities on DNRC-managed lands. The project area is situated just east of the Rocky Mountain Front, which provides habitat for many terrestrial species with high social value (*USFWS 1987*). Lands within the project area generally have high to very high value with regard to terrestrial species richness, particularly along some of the riparian areas (*DFWP 2010*). These lands also maintain moderate habitat value for prairie grouse species such as sharp-tailed grouse (*DFWP 2010*). Other notable species that may use the project area annually include: grizzly bears, black bears, gray wolves, mule deer, white-tailed deer, elk, moose, bald eagles, northern harriers, ferruginous hawks, sharp-tailed grouse, long-billed curlew, and numerous other grassland and riparian-associated terrestrial species. McCown's longspur and Sprague's pipit are ground-nesting species of concern that may occur on lands within or near the project area (*MNHP 2012*). Within the project area and cumulative effects analysis area primary existing land uses include agricultural crop production, livestock grazing and recreational activities such as hunting, fishing, hiking, and bird watching.

Analysis Areas

For this project, environmental effects were analyzed at two different scales. Direct and indirect effects were analyzed on the 9,450 acres of lands managed by DNRC. Cumulative effects were analyzed across the 81,960 acre area that includes state and private lands around the project area. DNRC is not aware of any additional concurrent state or federal activities planned within the area identified as the cumulative effects analysis area.

Description of the Alternatives

No Action Alternative

Under the no action alternative, no seismic activities would occur on DNRC-managed lands; however, seismic activities as proposed under the action alternative would occur on much of the other 72,510 acres of private lands in the project areas. For the most part, DNRC-managed lands in the project area are generally less than a full section and are surrounded by these private lands where activities would occur. As such, many of the effects to wildlife on the DNRC-managed parcels would likely occur regardless of the state's decision to conduct survey work on state trust lands. Activities in the area would be anticipated to take approximately 4-5.5 months.

Action Alternative

Under the action alternative, seismic exploration operations would be carried out using vibroseis trucks that use vibrations to map different layers of the ground. Activities would be conducted using existing road systems and overland routes; no new excavation or road construction would be required on DNRC-managed lands. Project activities would take place in four stages: 1) staking and surveying with ground crews, 2) placing receiver lines and equipment using ground and aerial crews, 3) conducting the seismic shoot using vibroseis trucks, and 4) removal of receiver lines and clean-up using ground and aerial crews. Activities would generally occur during the daylight hours; however proposed vibroseis activities in the Teton project area would likely occur during both day and night time periods. Activities in would be anticipated to take approximately 4-5.5 months, however, activities on DNRC-managed lands would be of much shorter duration given the amount of private lands in the area in relation to the smaller amounts of state trust lands.

Existing Condition and Environmental Effects

WILDLIFE DISTURBANCE

Issue: The proposed seismic activities could increase disturbance to wildlife in the vicinity, which could alter wildlife use of the project area.

EXISTING CONDITION

Activities in the proximity of wildlife can disturb or displace those wildlife species. Disturbance of wildlife by humans may elicit short-term or long-term behavioral (avoidance, habituation, or attraction) and/or physiological (affecting an individual's energy budget or population productivity) responses in wildlife (*Joslin and Youmans 1999*). Low level behavioral effects can include mild disturbance of individuals or interference with foraging or other life requisites. More detrimental behavioral effects can include abandoning habitat, habituation to human activities, and potentially mortality of individuals from habituation. Physiological effects can frequently be more subtle and may include a host of changes internally that are energetically costly to an individual or the population as a whole; physiological effects can include the energetic cost of moving away from the disturbance, to elevated heart rates while being disturbed, or increased stress associated with changing situations. Several factors influence the behavioral response of the various species of wildlife to human disturbance, including the type of disturbance, distance to the disturbance, speed, frequency, magnitude, and location of disturbance. Collectively, facilitating increases in human activities within wildlife habitats increases the potential for elevated wildlife disturbance. The area experiences varying levels of human use, which has created a baseline level of disturbance that the various wildlife species in the area has experienced in the past. The levels of all these factors would be expected to be elevated during 2012 with the ongoing seismic activities on adjacent private lands. Disturbance and temporary trampling of vegetation along survey and receiver routes would likely occur as a result of motorized activities during the proposed exploration period. These effects could occur as a result of ground crews on ATVs surveying, staking and orienting receiver lines and geophones, and as a result of activities associated with operation of several servo-

hydraulic vibroseis trucks and ground crews on ATVs during the pickup/cleanup phase of the project. While operating, vibroseis trucks could emit continuous motorized noise day and night. Noise and disturbance would also occur that would be associated with one helicopter used for multiple flights during daylight hours throughout the layout and cleanup phases of the project. Overall, the expected disturbance associated with the proposed activities would be expected to occur at a level and duration that would be foreign to many species inhabiting the area prior to startup actions. Depending upon the specific disturbance type, some species may flee a sizable distance (one or more miles) when disturbed (e.g. mule deer), whereas others (such as ground-nesting songbirds) may relocate a short distance away from the immediate disturbance source. Other less mobile species such as small mammals and larger burrowing species that can find refuge in the project area may alter daily activities in response to the new disturbances, but they would not likely be displaced any appreciable distance (less than 1 mile). Activities would be expected to revert to levels similar to the existing baseline in future years.

ENVIRONMENTAL EFFECTS

Direct, Indirect, and Cumulative Effects of the No-Action Alternative on Wildlife Disturbance

No seismic activities would occur on DNRC-managed lands; thus no additional disturbance would be introduced to those wildlife species using the DNRC-managed parcels; however given the size of those parcels and the proximity to the adjacent private lands where seismic activities are occurring would likely expose those species using the state parcels to some levels of disturbance. Several species and groups of wildlife are expected to exhibit increasing behavioral and physiological responses to the elevated human disturbance in the area, including those wildlife species using the DNRC-managed parcels. Thus, no additional direct, indirect, or cumulative effects to wildlife disturbance would be expected.

Direct, Indirect, and Cumulative Effects of the Action Alternative on Wildlife Disturbance

Proposed seismic activities on DNRC-managed lands would increase the cumulative amount of the area directly being disturbed, but negligible additional disturbance to wildlife would be anticipated given the small size of the DNRC-managed parcels and the intermingled ownership where seismic activities are already occurring. Some species would be expected to be somewhat tolerant of the disturbance while others may temporarily move from the area. Thus, negligible additional direct, indirect, and cumulative effects to wildlife disturbance would be expected.

FINE-FILTER ANALYSIS

In the fine-filter analysis, individual species of concern are evaluated. These species include wildlife species listed as threatened or endangered under the *Endangered Species Act of 1973*, species listed as sensitive by DNRC, and species managed as big game by DFWP. TABLE W-1 – FINE FILTER summarizes how each species considered was included in the following analysis or removed from further analysis because suitable habitat does not occur in the project area or proposed activities would not affect their required habitat components. The information and sources used to evaluate impacts related to the following species included: MNHP species occurrence record search (6/18/12), species specific assessments of distribution and habitat suitability, field reviews by local managers, assessment of anecdotal information obtained from local biologists on species occurrence, professional judgment, assessment of risk factors for each species, timing and duration of proposed activity, type of proposed activity, location of proposed activities, and scale of activity.

TABLE W-1– FINE FILTER. Status of species considered in the fine-filter analysis for this proposed project.

SPECIES/HABITAT	DETERMINATION – BASIS N = Not Present or No Impact is Likely to Occur Y = Impacts May Occur (Explain Below)
THREATENED AND ENDANGERED SPECIES	
Grizzly bear (<i>Ursus arctos</i>) Habitat: Recovery areas, security from human activity.	[Y] Some of the project area is within the Northern Continental Divide Ecosystem Recovery Zone (<i>USFWS 1993</i>) while the rest of the project area is in occupied grizzly habitat as mapped by grizzly bear researchers and managers to address increased sightings and encounters of grizzly bears in habitats outside of recovery zones (<i>Wittinger, 2002</i>). Grizzly bears have been documented in the project area. See detailed analysis below in this report.
Canada lynx (<i>Felis lynx</i>) Habitat: Subalpine fir habitat types, dense sapling, old forest, deep snow zone.	[N] The project area occurs outside of the elevations and habitat types where lynx are commonly found in Montana. No lynx habitats were identified in the project area. Thus, no direct, indirect, or cumulative effects to Canada lynx would be expected to occur as a result of either alternative.
SENSITIVE SPECIES	
Bald eagle (<i>Haliaeetus leucocephalus</i>) Habitat: Late-successional forest more than 1 mile from open water.	[Y] Bald eagles are present along the Rocky Mountain Front. However, habitat suitable for nesting eagles does not occur in the project area. Any appreciable use of the area would likely be confined to the winter period when eagles would likely be foraging on carrion. Thus, some slight potential for disturbance to wintering eagles would be possible with both alternatives. The proposed activities on DNRC-managed lands would not appreciably add to this potential for disturbance to wintering bald eagles. Thus, negligible direct, indirect or cumulative effects to bald eagles would be anticipated.
Black-backed woodpecker (<i>Picoides arcticus</i>) Habitat: Mature to old burned or beetle-infested forest.	[N] Habitat suitable for use by black-backed woodpeckers does not occur within the project area or cumulative effects analysis area. Thus, no direct, indirect, or cumulative effects to black-backed woodpeckers would be expected to occur as a result of either alternative.
Black-tailed Prairie Dog (<i>Cynomys ludovicianus</i>) Habitat: Prairie, shortgrass prairie, badlands	[N] No known prairie dog colonies occur within the project area or cumulative effects analysis area. Thus, no direct, indirect, or cumulative effects to black-tailed prairie dogs would be anticipated to occur as a result of either alternative.
Ferruginous Hawk (<i>Buteo regalis</i>) Habitat: prairies and badlands	[Y] Ferruginous hawks have been observed in the vicinity of the project area and potential nesting habitat may be present. Project activities would largely occur outside of the nesting season (April 1-July 30) (<i>USFWS 1987</i>). However, there is some potential for displacement of individuals due to ground and aerial helicopter activities should hawks be present near active work zones. By conducting activities in the late summer/ fall/early winter, the potential for displacement and adverse effects to ferruginous hawks would be lessened. See the Grassland Birds section below for more detailed analysis. Given the seasons in which activities would occur, the types of activities that would occur, and the short duration of planned activities, no adverse direct, indirect, and cumulative effects (No Action Alternative) or minor adverse direct, indirect, and cumulative effects (Action Alternative) to ferruginous hawks would be anticipated.
Flammulated owl (<i>Otus flammeolus</i>) Habitat: Late-successional ponderosa pine and Douglas-fir forest.	[N] Habitat suitable for use by flammulated owls does not occur within the project area or cumulative effects analysis area. Thus, no direct, indirect, or cumulative effects to flammulated owls would be expected to occur as a result of either alternative.

<p>Gray Wolf (<i>Canis lupus</i>) Habitat: Ample big game populations, security from human activities.</p>	<p>[Y] The suspected Bennie Hill pack has been in the vicinity in the past, but no den or rendezvous sites are known to exist in the vicinity. Ongoing seismic activities as well as proposed activities would occur outside of the sensitive spring denning season (April 1 to June 30). Some disturbance could occur with either alternative (see above discussion for more information), and the action alternative would not be expected to appreciably add to the existing disturbance. Given the seasons in which activities would occur, the types of activities that would occur, and the short duration of planned activities, no adverse direct, indirect, and cumulative effects (No Action Alternative) or negligible adverse direct, indirect, and cumulative effects (Action Alternative) to gray wolves would be anticipated.</p>
<p>Greater Sage-grouse (<i>Centrocercus urophasianus</i>) Habitat: sagebrush semi-desert</p>	<p>[N] Developed sagebrush communities do not occur on the project area of within the cumulative effects analysis area, and no sage-grouse flocks or leks are known to occur in these areas. Thus, no direct, indirect, or cumulative effects to greater sage grouse would be expected to occur as a result of either alternative.</p>
<p>Harlequin duck (<i>Histrionicus histrionicus</i>) Habitat: White-water streams, boulder and cobble substrates.</p>	<p>[Y] Harlequin ducks have been documented west of the project area; suitable habitat is potentially present in portions of Dupuyer Creek. Project activities would occur outside of the core nesting season. However, there is some potential for displacement of individuals due to aerial helicopter activities should they be present near active work zones. By conducting activities in late summer/fall/winter and by limiting activities adjacent to riparian features, the potential for displacement and adverse effects to harlequin ducks would be lessened. Given the seasons in which activities would occur, the types of activities that would occur, and the planned restriction of activities in areas along riparian areas, no adverse direct, indirect, and cumulative effects (No Action Alternative) or minor adverse direct, indirect, and cumulative effects (Action Alternative) to Harlequin ducks would be anticipated.</p>
<p>Long-billed Curlew (<i>Numenius americanus</i>) Habitat: moist meadows and dry upland prairies</p>	<p>[Y] Long-billed curlews have been observed in the vicinity of the project area and potential nesting habitat may be present. Proposed seismic activities as well as those occurring in the existing condition would occur outside of the important spring nesting season. Some displacement of individuals due to ground and aerial helicopter activities could occur and any increase associated with the action alternative would not be measurable from the existing condition. See the Grassland Birds section below for more detailed analysis. Given the seasons in which activities would occur, the types of activities that would occur, and the short duration of planned activities, no adverse direct, indirect, and cumulative effects (No Action Alternative) or minor adverse direct, indirect, and cumulative effects (Action Alternative) to Long-billed Curlew would be anticipated.</p>
<p>McCown's Longspur (<i>Rhynchophanes mccownii</i>) Habitat: dry short-grass plains</p>	<p>[Y] The project area occurs within the known distribution of McCown's longspurs and pockets of potential nesting habitats may occur in the area. Proposed seismic activities as well as those occurring in the existing condition would occur outside of the important spring nesting season. Some displacement of individuals due to ground and aerial helicopter activities could occur and any increase associated with the action alternative would be immeasurable from the existing condition. See the Grassland Birds section below for more detailed analysis. Given the season activities would occur, the types of activities that would occur, and the short duration of planned activities, no adverse direct, indirect, and cumulative effects (no action alternative) and minor adverse direct, indirect, and cumulative effects (Action Alternative) to McCown's Longspur would be anticipated.</p>

Mountain Plover (<i>Charadrius montanus</i>) Habitat: short-grass prairie, alkaline flats, prairie dog towns	[N] Short-grass prairie types and prairie dog towns are not present in the project area and no observations of mountain plovers have been reported in the local geographic area. Thus, no direct, indirect or cumulative effects to mountain plovers would be expected as a result of either alternative.
Northern bog lemming (<i>Synaptomys borealis</i>) Habitat: Sphagnum meadows, bogs, fens with thick moss mats.	[N] The project area is outside of the known distribution of bog lemmings. Further, motor vehicle use would be prohibited within any wet meadows, bogs or fens that could occur within the project area, which would protect potential habitat or suitable features should they be present. Thus, no direct, indirect, or cumulative effects to northern bog lemmings would be expected to occur as a result of either alternative.
Peregrine falcon (<i>Falco peregrinus</i>) Habitat: Cliff features near open foraging areas and/or wetlands.	[N] Peregrine falcons have been documented in the vicinity of the project area and suitable foraging areas occur all along the Rocky Mountain Front. However, cliff features suitable for nesting sites do not exist within the project area or cumulative effects analysis area. Thus, the potential for adverse direct, indirect, or cumulative effects to peregrine falcons would be minimal as a result of either alternative.
Pileated woodpecker (<i>Dryocopus pileatus</i>) Habitat: Late-successional ponderosa pine and larch-fir forest.	[N] Forested habitat suitable for use by pileated woodpeckers does not occur within the project area or cumulative effects analysis area. Thus, no direct, indirect, or cumulative effects to pileated woodpeckers would be anticipated as a result of either alternative.
Sprague's Pipit (<i>Anthus spragueii</i>) Habitat: native medium to intermediate height prairie	[Y] The project area occurs within the known distribution of Sprague's pipit, and grassland habitat found on the project area is potentially suitable for this species. Proposed seismic activities as well as those occurring in the existing condition would occur outside of the important spring nesting season. Some displacement of individuals due to ground and aerial helicopter activities could occur and any increase associated with the action alternative would be immeasurable from the existing condition. See the Grassland Birds section below for more detailed analysis. Given the seasons in which activities would occur, the types of activities that would occur, and the short duration of planned activities, no adverse direct, indirect, and cumulative effects (No Action Alternative) or minor adverse direct, indirect, and cumulative effects (Action Alternative) to Sprague's pipits would be anticipated.
Townsend's big-eared bat (<i>Plecotus townsendii</i>) Habitat: Caves, caverns, old mines.	[N] Caves suitable for use by Townsend's big-eared bats are not known to occur within the project area or cumulative effects analysis area. Thus, no direct, indirect, or cumulative effects to Townsend's big-eared bats are anticipated as a result of either alternative.

GRIZZLY BEAR

Issue: The proposed seismic activities could: 1) disturb or displace grizzly bears from preferred feeding areas during important nutritional periods; 2) adversely affect grizzly bear habitat resulting in lower suitability and quality; 3) increase the potential for bear/human encounters; and 4) introduce unnatural food sources or other attractants which could lead to the removal of problem bears.

EXISTING CONDITION

Some of the project area is within the Northern Continental Divide Ecosystem (NCDE) Recovery Zone (USFWS 1993) while the rest of the project area is in occupied grizzly habitat as mapped by grizzly bear researchers and managers to address increased sightings and encounters of grizzly bears in habitats outside of recovery zones (Wittinger, 2002). Grizzly bears have been documented in the project area. Grizzly bears generally use different habitats relative to season. The project area could provide a combination of habitats for grizzly bears throughout the non-denning period; potential foraging and

resting habitats in the project area include the lower elevation riparian areas, brushy areas, meadows, aspen stands, and big game winter ranges. The area is exposed to varying levels of human use, which has created baseline levels of disturbance, habitat modification, human-bear interactions, and unnatural food sources and other attractants that grizzly bears using the area have experienced. The levels of all these factors are expected to be elevated during the non-denning period in 2012 with the ongoing seismic activities occurring on adjacent private lands. Potential disturbance of grizzly bears could occur, particularly with the use of helicopters and vibroseis trucks. Human activity levels and associated influences on grizzly bears would be expected to revert to levels similar to the existing baseline in future years.

ENVIRONMENTAL EFFECTS

Direct, Indirect, and Cumulative Effects of the No-Action Alternative on Grizzly Bears

No seismic activities would occur on DNRC-managed lands, and those grizzly bears in the project area would not be further affected. Disturbance associated with activities on adjacent lands would continue, which could continue to affect grizzly bears. Thus, no direct, indirect, or cumulative effects to grizzly bears would be anticipated since: 1) no further disturbance or displacement would be expected; 2) no further changes in existing habitats would occur; 3) no changes in the potential for grizzly bear-human interactions would occur; and 4) no changes in availability of unnatural food sources or other attractants would occur.

Direct, Indirect, and Cumulative Effects of the Action Alternative on Grizzly Bears

Proposed seismic activities on DNRC-managed lands would negligibly add to the potential disturbance and displacement of grizzly bears in the area. Slight increases in the amount of grizzly bear habitats potentially trafficked would occur, however activities would avoid riparian areas, aspen stands, and brushy habitats on DNRC-managed parcels that would likely receive more use by bears. Some vegetation trampling in the uplands could occur. Disturbance associated with mechanized seismic activities, including helicopter use, and the increased presence of humans during the non-denning period could cause individual bears to flee and be displaced from the immediate area, should they be present. Should displacement occur, it would not be expected for extended periods (> 1 month) beyond the end date of proposed activities, particularly as desirable berries and other foods are available in early fall in preferred feeding areas. No disturbance or displacement would be anticipated for activities that would occur during the denning period. Mitigations designed to avoid riparian and brushy areas on DNRC-managed lands would lessen the potential for displacement of grizzly bears from preferred sites and minimize risk of human/bear encounters. However, motorized activities would occur at a distance, frequency and intensity that could displace grizzly bears from some portions of the project area. No appreciable changes in potential disturbance associated with helicopter or heavy equipment use would be anticipated beyond the existing conditions. To further minimize this potential, state land activities would be restricted to occur only during the late summer and early fall, which is mostly outside of the most important spring feeding times for grizzly bears (e.g. April 1 to June 30). Some activities would likely occur during the fall feeding period, which could affect some grizzly bears during this feeding period if they are using the area.

With ground crews working in the area, some potential for grizzly bear encounters would be present. To minimize this potential, ground crews would be required to carry bear spray and go through a brief training session with MT FWP on working safely in occupied grizzly bear habitat or an equivalent training with a qualified consultant. Activities during the non-denning period would only occur during daylight hours, which would minimize the potential for surprise encounters with active grizzly bears. To minimize risk associated with grizzly bear attractants, workers would be required to store any bear attractants such as foods and garbage in a bear resistant manner at all times when unattended. Crews would also be prohibited from camping on work sites within the DNRC-managed lands to minimize the potential of attracting and rewarding grizzly bears with unnatural foods. Activities occurring during the denning period would minimize the potential for effects to grizzly bears. Thus, minor adverse direct,

indirect, and cumulative effects to grizzly bears would be expected since: 1) negligible increases in potential disturbance to grizzly bears would occur; 2) no further changes in existing riparian habitats, aspen stands, or brushy areas would occur; 3) timing and mitigations would reduce the potential for grizzly bear-human interactions; and 4) negligible changes in the availability of unnatural food sources or other attractants would occur with the proposed mitigations.

GRASSLAND BIRDS

Issue: The proposed seismic activities could disturb or displace grassland nesting birds and/or adversely affect suitability and quality of nesting habitats.

EXISTING CONDITION

Numerous grasslands dominated by native and introduced grass species exist in the project area. A suite of avian species utilizes the various types of grasslands in the project area for nesting and foraging during the nesting season. This list includes several of the sensitive species identified above, including Long-billed Curlew, McCown's Longspur, and Sprague's pipit. The area is exposed to varying levels of human use, which has created baseline levels of disturbance and habitat modification that the grassland birds using the area have experienced. Industrial noise is a contributing factor in reduced production in some of these grassland species, and the ongoing seismic activities could contribute to reduced production for 2012; however the majority of the industrial noise producing activities would occur later in the nesting season or after the nesting season is complete, thereby minimizing the effect of grassland nesting birds. Similarly these mechanized activities could destroy nests, but again activities are generally occurring near the end of or after the nesting period. Some reductions in nesting structure for future years could occur; however nesting structure is fairly abundant and would be expected to recover fairly rapidly. In general, levels of human disturbance in the vicinity are expected to be elevated in 2012 with the ongoing seismic activities on private lands and human activity levels and associated habitat modifications would be expected to revert to levels similar to the existing baseline in future years.

ENVIRONMENTAL EFFECTS

Direct, Indirect, and Cumulative Effects of the No-Action Alternative on Grassland Birds

No activities would be conducted on DNRC-managed lands; however grassland birds on these parcels would likely at least be partially disturbed due to activities in the vicinity during the nesting season of 2012. However, much of the noise and disturbance would occur at the end of the nesting season or after the nesting season is over, minimizing the potential for additional effects beyond the existing condition. No grasslands on DNRC-managed lands would be trafficked with heavy equipment and thus no potential destruction of nests or young would be anticipated. Ongoing activities could reduce nesting success and production in the cumulative effects analysis area for the current nesting season. Some reductions in available nesting structure could be realized across the cumulative effects analysis area due to the operations; however nesting structure for next year's nesting season would not be appreciably altered on DNRC-managed lands. Thus, no direct, indirect or cumulative effects to grassland nesting birds would be expected since: 1) no further disturbance of grassland birds on DNRC-managed lands would occur; and 2) no changes to nesting structure would occur.

Direct, Indirect, and Cumulative Effects of the Action Alternative on Grassland Birds

Proposed activities would contribute negligible additional industrial noise beyond the existing condition. Much of the noise and disturbance would occur at the end of the nesting season or after the nesting season is completed, minimizing the potential for additional effects beyond the existing condition. Some additional acreage of grasslands would be trafficked with heavy equipment; however this activity would be concentrated in the late nesting season or after the nesting season is over, which would not directly affect nesting grassland birds. Some reductions in available nesting structure could be realized on DNRC-managed lands for the 2013 nesting season with the proposed activities, which would be additive

to the reductions within the cumulative effects analysis area. These reductions would not be expected to appreciably alter future nesting success or production in the area and should only persist into the nesting season of 2013. Thus, minor adverse direct, indirect and cumulative effects to grassland nesting birds would be expected since: 1) minor increases disturbance of grassland birds on DNRC-managed lands would occur with negligible increases in overall cumulative levels of disturbance being anticipated; and 2) some additional trafficking could reduce available nesting structure in the near term.

BIG GAME

Issue: The proposed seismic activities could: 1) disturb or displace big game species from important wintering areas during the winter period; 2) disturb or displace big game species from calving/fawning areas in the spring calving/fawning period; and 3) disrupt recreational hunting activities.

EXISTING CONDITION

The project area likely provides habitat for several big game species, including pronghorn antelope, mule deer, elk, white-tailed deer, and moose. Winter range for mule deer and elk exist in the project area and non-winter use by many of the big game species is likely, including use during both the important calving season and the socially important hunting seasons. Winter ranges enable big game survival by minimizing the effects of severe winter weather conditions. Winter ranges tend to be relatively small areas that support large numbers of big game, which are widely distributed during the remainder of the year.

Similarly, the annual event of giving birth or parturition is an important time for deer and elk. These big game species exhibit very specific behavior and seek specific habitats for calving/fawning. These areas used for calving/fawning are generally most important in the spring calving/fawning period. Generally, big game species often select areas with reduced human disturbance for calving/fawning areas. The project area is known to be used by elk for calving and deer for fawning.

Several of the big game species being discussed are hunted during the fall hunting seasons. This opportunity is important socially and economically for the area. Activities that alter accessibility and/or hunter experience could be perceived as a negative effect for those individuals recreating or residing in the area.

The area is exposed to varying levels of human use, which has created a baseline level of disturbance that the various wildlife in the area have experienced. The levels of all these factors would be expected to be elevated during 2012 with the ongoing seismic activities on adjacent private lands. Ungulates (particularly pronghorn antelope, elk, and mule deer) have exhibited fairly strong avoidance of seismic exploration (*Hebblewhite 2008*). Following seismic activities, big game activity patterns and any changes to recreational hunting would be expected to revert to levels similar to the existing baseline.

ENVIRONMENTAL EFFECTS

Direct, Indirect, and Cumulative Effects of the No-Action Alternative on Big Game

No seismic activities would occur on DNRC-managed lands, and individuals of the various big game species using the project area would not be further affected. However given the size of the DNRC-managed parcels and the proximity to the adjacent private lands where seismic activities are occurring would likely expose big game using the project area to some levels of disturbance and displacement. Thus, no direct, indirect, or cumulative effects to big game would be anticipated since: 1) no further disturbance or displacement from winter ranges would be expected; 2) no further changes in human disturbance on calving/fawning areas would occur while big game species are calving/fawning; 3) no changes in the potential hunting access or hunter experience would occur.

Direct, Indirect, and Cumulative Effects of the Action Alternative on Big Game

Proposed seismic activities on DNRC-managed lands would negligibly add to the potential disturbance and displacement of big game species in the area. Both permits could negligibly alter vegetation on the existing winter ranges. The activities proposed under the Pendroy permit would be permitted between July and October, and as such would not disturb wintering big game; meanwhile the proposed activities associated with the Teton permit would occur in the fall and early winter which would increase the potential for disturbing wintering big game. Neither of the permits would be active during the spring calving/fawning period. Besides some vegetation trampling, no effects to calving/fawning big game would be anticipated. Recreational hunting activities could be disrupted to some degree; however, no changes in human access would be anticipated. Some changes in big game activity patterns may alter availability of big game. As activities would occur for a short period of time and would take place in a successional manner across the survey area vs. concurrently, the potential to displace any big game species or individuals permanently would be expected to be minimal. However, some short-term displacement would be likely, should individuals be present in the area at the time of the survey work. Thus, minor adverse direct, indirect, and cumulative effects to big game would be anticipated since: 1) some disturbance and displacement of wintering big game on winter range could occur, but the majority of activities would occur outside of the important wintering period; 2) no further changes in human disturbance on calving/fawning areas would occur while big game species are calving/fawning; 3) no appreciable changes in hunting access and minor potential for changes to hunter experience would be expected.

WETLANDS AND AQUATIC SPECIES

Issue: The proposed seismic activities could adversely affect sensitive wetland communities and riparian habitats and associated aquatic species that may occur in the project area.

EXISTING CONDITION

Wetlands, riparian areas, and areas near water sources generally tend to support a higher diversity of animal and plant species despite their generally smaller area. Particularly in drier environments, areas near water can concentrate use by species that are otherwise dispersed among the adjacent upland habitats. Disturbance in these relatively smaller areas not only can influence more species due to the diversity of these areas, but can also disrupt those species using the uplands for much of their life requisites but visiting the riparian areas for water or other life requisites. Additionally, these wetlands and riparian areas are fairly sensitive and can be damaged by heavy equipment. Generally, these areas have been exposed to varying levels of human use, which has created baseline levels of disturbance and habitat modification that the species using these riparian areas in the area have experienced. The levels of these factors would be expected to be elevated during 2012 with the ongoing seismic activities on adjacent private lands. Human activities and associated effects would be expected to revert to levels similar to the existing baseline in future years.

ENVIRONMENTAL EFFECTS

Direct, Indirect, and Cumulative Effects of the No-Action Alternative on Wetlands and Aquatic Species

No activities would be conducted on DNRC-managed lands; however aquatic species on these parcels would likely at least be partially disturbed due to activities in the vicinity for portions of 2012. No wetlands or riparian areas on DNRC-managed lands would be trafficked with heavy equipment and thus no potential modification of these habitats would occur. Ongoing activities could alter wetlands and riparian areas in the cumulative effects analysis area due to the operations. Thus, no direct, indirect or cumulative effects to wetlands or aquatic species would be expected since: 1) no further disturbance to wetlands or riparian areas on DNRC-managed lands would occur; and 2) no changes to habitats associated with wetlands or riparian areas would occur.

Direct, Indirect, and Cumulative Effects of the Action Alternative on Wetlands and Aquatic Species

Activities on DNRC-managed lands would avoid sensitive riparian and wetland areas. Activities near riparian areas could contribute to the disturbance in these wetland and riparian areas, which would be slightly additive to the levels of disturbance associated with the existing condition. Vehicles would be prohibited from entering wet sites and crossing sensitive wetlands and riparian areas on DNRC-managed lands, thus no further modifications of these habitats would occur. Thus, minor adverse direct, indirect and cumulative effects to wetlands or aquatic species would be expected since: 1) negligible increase in potential disturbance to wetlands or riparian areas on DNRC-managed lands would occur; and 2) no further changes to habitats associated with wetlands or riparian areas would occur.

Suggested Mitigations for Action Alternative

The primary mitigation incorporated into the proposed project considered to lessen many issues of concern for wildlife, is to restrict the period of operation on DNRC-managed lands to occur from late July through mid-December. By requiring all associated field activities to occur during this operational window, the vast majority of potential adverse impacts associated with project-related disturbance and/or trampling can be minimized or avoided. These include lessened effects for ground-nesting birds, other nesting upland and riparian song birds, raptors, calving and denning mammals during the spring season, and the sensitive spring period for grizzly bears. Additionally some activities would occur in the grizzly bear denning period, further minimizing the potential for effects to grizzly bears. Similarly, any potential for disturbance and displacement to wintering elk and deer herds can be largely avoided with the proposed seasons of operation.

Specific Mitigations:

- A DNRC biologist would be consulted if a threatened or endangered species were encountered to determine if additional mitigations are needed.
- To minimize risk of disturbance and displacement of grizzly bears and surprise bear encounters, prohibit ground activities within 1/8 mile of brushy areas along riparian areas and prohibit ATV and foot travel into dense, brushy portions of the survey area.
- For human safety, brief staff conducting ground activities on working safely in bear habitat and train in the effective use of bear spray; require ground crews to carry bear spray.
- To minimize risk of bear habituation and human/bear encounters, prohibit on site camping within the project area.
- To minimize risk of bear habituation and human/bear encounters, require that any bear attractants, including food and garbage be stored in a bear resistant manner.
- To minimize potential for disturbance and displacement during the most important periods during the year for ground-nesting birds, other song birds, raptors, carnivores, and big game species, restrict the allowable period of ground and aerial activities to occur from late July through mid-December.
- To minimize the extent of displacement associated with project-related disturbances, conduct ground activities to the extent possible in a sequential vs. a concurrent manner.
- To minimize risk of weed introduction and spread, require power washing of all vehicles, vibroseis trucks, ATVs and other equipment before entering the survey area.
- To minimize potential for disturbance and adverse impacts to sensitive wetland plant and animal species, prohibit use of vehicles in wetlands and riparian areas.

References

- DFWP 2010. Montana Fish, Wildlife and Parks crucial areas planning system. Version 1.0. Helena, Montana. April 2010.
- USFWS 1987. Interagency Rocky Mountain Front wildlife monitoring/evaluation program. Management guidelines for selected species. September 1987. 71 pp.
- Hebblewhite, M. 2008. A literature review of the effects of energy development on ungulates: Implications for central and eastern Montana. Report prepared for Montana Fish, Wildlife and Parks, Miles City, MT.
- Joslin, G., and H. Youmans, coordinators. 1999. Effects of recreation on Rocky Mountain wildlife: A Review for Montana. Committee on Effects of Recreation on Wildlife, Montana Chapter of The Wildlife Society. 307pp.
- MNHP 2011. Montana Natural Heritage Program species of concern query -- Natural Heritage Tracker. June 18, 2012.
- Wittinger, W.T. 2002. Grizzly bear distribution outside of recovery zones. Unpublished memorandum on file at USDA Forest Service, Region 1. Missoula, Montana.2pp.

Attachment C
Comments Received and Response to Comments

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Responses to Comments:

- [REDACTED] – No physical ground disturbing actions are planned. Operations are to be conducted during dry or frozen periods, which will aid in mitigating disturbance (See Section 4 and 7 of the EA). Soils throughout the project area are well developed and having a high potential to fully recover after being disturbed (Section 4). To minimize risk of weed introduction and spread, power washing of all vehicles, vibroseis trucks, ATVs and other equipment will be required before entering the survey area (Section 7). DNRC will inspect equipment prior to the project. Crews will be briefed on identification of noxious weeds and instructed to avoid known infestations. A search conducted with the Natural Heritage Program found no vegetative species of concern located within the seismic shoot area. Riparian areas or other wet marshy areas are to be avoided (Section 7).
- [REDACTED] – See section 8 and 9 of the EA for concerns relating to wildlife, habitat, and sensitive species. Wildlife analysis was completed by DNRC staff Wildlife Biologist Garrett Schairer. This analysis and mitigations are found in attachment B.
- [REDACTED] – Sections 10, 11, & 20. Seismic crews will be required by stipulations to avoid and report any historical, archaeological, and paleontological resources encountered. The DNRC has noted two historical areas on State land, one of which has been formally documented (24PN107) and will be flagged and avoided. Seismic activity carried out on dry or frozen ground is expected to have little potential to adversely affect heritage. Permit stipulations would require any historical, archeological, and paleontological resources encountered to be avoided and reported. Operations are restricted to specific time frames on State lands and are of short duration. Seismic operations will overlap with parts of the big game and hunting season and may cause temporary displacement of wildlife and limit successful hunting on state land during the early part of the hunting season. Other recreational use is not expected to be impacted.
- [REDACTED] – Sections 5 & 6. All surface waters are to be avoided on State lands. 300' buffer areas are to be maintained around springs, water wells, streams, lakes, or water storage facilities. . Riparian areas will be walk in only and the crossing of these areas with motorized equipment is not permitted. Equipment operations, including ATVs, UTVs, pick-ups and fibroses trucks will be prohibited within all riparian areas or wet areas. Riparian areas will be identified in pre-meeting with the seismic operations management and the Conrad Unit Office. Mitigations will be in place to prevent disturbance to surface and groundwater quality and quantity as well as surface soils, thus no cumulative effects to the water resources or air quality are anticipated.
- [REDACTED] – This EA focuses on the portion of the proposed activity which occurs on State mineral ownership. State lands constitute approximately 12% of the total seismic shoot area. The DNRC TLMD has no authority over the proposed activity occurring on the other 88% of the lands that overlay private mineral ownership. Seismic exploration will occur on the private mineral ownership regardless of whether State lands are involved. (See Part I.)

Future Oil and Gas Concerns – This EA addresses the proposed activity. Wells may or may not be proposed in the future, and may or may not involve State lands. See Part I of the EA.

Concerns about General Oil and Gas Exploration and Development on State Lands: The Department has an obligation to obtain the greatest benefit for the school trusts pursuant to 77-1-202 MCA. The greatest monetary return must be weighed against the long-term productivity of the land to ensure sustained future returns to the trust beneficiaries. This results in land management for multiple uses, so that they are utilized in that combination best meeting the needs of the people and the school trust beneficiaries.

Modern Seismic operations result in far fewer environmental impacts than seismic operations conducted twenty years ago (See Section 19 in the EA.)

Seismic Companies are required by statute to post a bond with the Secretary of State. The DNRC will also require a \$10,000 bond to be posted for each permit before the permits are approved.

Assessing additional taxes for general seismic operations is not a function the Land Board has authority over.

■ [REDACTED] – Section 15 covers impacts to Industrial, commercial and Agriculture activities and production. Temporary inconveniences to local ranches are expected during the seismic project. However, the proposed seismic project is short-term and will not change the current use of the landscape in the area. Land classification will remain as agricultural and grazing following the project. Company will compensate surface lessees and owners for actual surface damages.

Eneboe, Erik

From: Gene & Linda Sentz [friends@3rivers.net]
Sent: Thursday, May 24, 2012 5:59 PM
To: Eneboe, Erik
Subject: Pendroy 3-D Seismic / Teton 3-D Seismic

You probably have this down as a top priority already:

1

A thick green horizontal bar redacting a line of text.

Try to keep them from having as little negative impact on the land as possible.

Gene Sentz
Choteau, MT 59422-0763

Eneboe, Erik

From: Gene & Linda Sentz [friends@3rivers.net]
Sent: Wednesday, May 30, 2012 5:01 PM
To: Eneboe, Erik
Cc: Sexton, Mary; Schweitzer, Brian; McCulloch, Linda; Jacke, Sandy; SAO StateAuditor; Juneau, Denise
Subject: Pendroy 3-D Seismic / Teton 3-D Seismic

Erik Eneboe, Conrad Unit Manager
DNRC – Conrad Unit Office
PO Box 961
600 South Main, Suite 10
Conrad, MT 59425
eneboe@mt.gov

Re: Environmental Assessment for Seismic Operations of State School Trust Lands in Western Pondera and Teton Counties

Dear Eric, et al:

5

[Redacted]

2

[Redacted]

Private and state lands have been leased, however, so the thing that you at DNRC must do for the State Lands is make absolutely sure to apply all the special Rocky Mountain Front stipulations both in the EA, and even more important, in on-the-ground enforcement.

Thank you,

Gene Sentz
Friends of the Rocky Mountain Front
PO Box 763
Choteau, Montana 59422

Eneboe, Erik

From: Gene & Linda Sentz [friends@3rivers.net]
Sent: Saturday, June 02, 2012 11:40 AM
To: Eneboe, Erik
Cc: Sexton, Mary; Schweitzer, Brian; Juneau, Denise; SAO State Auditor; McCulloch, Linda; Jacke, Sandy
Subject: Daily Inter Lake: Bear panel watches oil activity on east side

Eric,
Please add this article to the public comments for your upcoming EA on proposed seismic work east of the Rocky Mtn Front. Sounds like the potential cumulative effects might require some kind of inter-agency EIS?
Gene Sentz
Choteau

2

The Daily Inter Lake, Kalispell, Montana
Saturday, June 2, 2012

By JIM MANN/The Daily Inter Lake

An interagency panel of land and wildlife managers has turned its attention to the impacts on grizzly bears from oil-and-gas exploration and extraction on the Rocky Mountain Front.

The Northern Continental Divide Ecosystem Subcommittee is geared toward delisting the grizzly bear population, with a draft Conservation Strategy for doing so expected to be released this summer.

But removing the threatened Northern Rockies grizzly bear population from protection under the Endangered Species Act is still "several years out," said Chris Servheen, grizzly bear recovery coordinator with the U.S. Fish and Wildlife Service.

Before the species can be delisted, he said, multiple agencies "have to demonstrate that adequate regulatory mechanisms exist to make sure the population and habitat remain healthy."

And that's where oil extraction on the Rocky Mountain Front could come in to play.

"There is concern about that," Servheen said. "It's something new and something we haven't dealt with in the past."

At a Thursday meeting at the Hungry Horse Ranger Station, the subcommittee got a primer on the issue for the first time, hearing from Bureau of Indian Affairs biologist Jarvis Gust and grizzly bear management specialists Dan Carney and Mike Madel.

Gust described how three companies have entered into different agreements with the Blackfeet tribe for exploration activities on the reservation.

On the western flank of the Blackfeet Reservation, the Anschutz Exploration Corporation now has 18 exploration wells either permitted or drilled.

Down the middle swath of the reservation, Newfield Exploration Company has 22 permits.

And on the eastern side of the reservation, Rosetta Resources has 30 permits. In addition, an environmental assessment is being developed for an additional 88 exploration wells for Rosetta.

Gust emphasized that all of the permitting is for exploration activity only, and if the companies and the tribe pursued development, that would trigger a new and more rigorous environmental review process.

But for exploration, environmental assessments are being conducted on a well-by-well basis, said Carney, the Blackfeet tribal grizzly bear management specialist.

"There's potential, obviously, for a lot more wells," Carney said.

Glacier National Park officials are weighing in their concerns on each of the environmental assessments conducted for Anschutz wells on the western side of the reservation near the park.

Impacts on views, night skies, air quality, water quality and grizzly bears and other wildlife are of concern. But a major theme for Glacier National Park is the piecemeal manner in which exploration activity is being reviewed.

"Given the number of EAs prepared for exploratory wells on the Blackfeet Reservation, the park believes an Environmental Impact Statement is needed to address the entire scope and plan for exploratory and permanent oil and gas development," the park wrote in comments for one well.

"Cumulative impacts to park and Reservation resources cannot be adequately addressed on a well-by-well basis."

Michael Jamison, a spokesman for the National Parks Conservation Association, has similar concerns.

"To date, no one has explored fully the cumulative impacts that would be associated with full field development and the industrialization of Glacier's front door," Jamison said.

He said the Blackfeet Tribe is justified in exploring the economic development benefits that could result, and he thinks the oil companies should have regulatory predictability.

"But it can't be done on a well-by-well basis," he said. "There needs to be a more comprehensive plan."

Farther south along the front, exploration and some drilling have been carried out on private lands. But in recent years, grizzly bears have been increasingly wandering farther into the riparian draws that cut through prairie grasslands, said Madel, grizzly bear management specialist for Montana Fish, Wildlife and Parks.

Grizzly bears now are avoiding areas where there is seismic exploration activity, oil company camps and drilling pads — areas the bears were using in the past.

"They do move bears around, there's no doubt about it," Madel said.

Of greater concern to Madel are recent exploration company applications for seismic testing permits on state lands that directly abut the Rocky Mountain Front.

The Great Falls Tribune reported this week that two companies are seeking permits for seismic operations on 9,450 acres of lands managed by Montana Department of Natural Resources and Conservation. Because the land is considered so sensitive, the DNRC in 2006 increased its environmental review standards to protect wildlife that use that habitat.

Servheen noted that concerns aren't limited to impacts on wildlife. Knowing full well how development of the Bakken formation has affected communities in North Dakota and eastern Montana, he said, there is growing awareness of how similar development would impact small communities along the Rocky Mountain Front.

"There's a lot of potential impacts here, so everybody has their eyes open about what this is all about," he said.

Reporter Jim Mann may be reached at 758-4407 or by email at jmann@dailyinterlake.com.

Eneboe, Erik

From: sheardel@3rivers.net
Sent: Thursday, June 14, 2012 2:05 PM
To: Eneboe, Erik
Subject: Pendroy 3-D Seismic/Teton 3-D Seismic

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[Redacted]

My understanding of the activities that will be done seem to indicate minor damage potential. The State needs to make sure that the companies doing this follow the rules laid out but i believe it should be allowed to proceed.

Jim Lear

From: Karl & Teri Rappold [<mailto:rappold@3rivers.net>]
Sent: Monday, June 25, 2012 6:11 PM
To: Eneboe, Erik
Subject: Pendorry 3-D Seismic/Teton 3-D Seismic

6

[Redacted content]

Thank you,
Karl Rappold
Rappold Ranch
Dupuyer, MT.

Erik Eneboe, Conrad Unit Manager
DNRC – Conrad Unit Office

I am commenting on the Pendroy 3-D Seismic/Teton 3-D Seismic environmental assessment. My concerns with the proposed seismic testing include the following:

2

[Redacted]

1

[Redacted]

5

[Redacted]

[Redacted]

[Redacted]

7. If the seismic work goes ahead there need to be on-site monitors to ensure compliance with stipulations of the state contract.

Thanks for the opportunity to comment.

Elaine Sedlack
Box 1173
Choteau, MT 59422
easedlack@3rivers.net

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JUN 26 2011
DNRC CONRAD UNIT

RECEIVED
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DNRC CONRAD UNIT

Name Nancy Hoffman Milewski

Phone Number 406 201

RECEIVED

JUN 26 2011

Address PO Box 186 Choteau, MT

Email DNRC CONRAD UNIT

Comments:

I have 2 comments; one related to my experience as a small business owner with Primary Petroleum, the other regarding weeds.

I have a small service (laundry) business in Choteau. During discussions with Primary employee/site manager Bill Paddock, he repeatedly referred to Environmental Assessments, as well as any environmental concerns, as 'stupid' 'excessive' and 'holding us hostage'. My concern is that hearing environmental quality concerns referred to with such language and negative emotion, on more than one contact, with the management level company rep, is one of compliance and ^{resulting} ⁱⁿ ^{lack of} oversight of any impact stipulations and/or mitigation. In short, I doubt Primary Petroleum's commitment to our state lands.

[Redacted]

Overall, I am very skeptical that the seismic operations will result in a positive result to the Front, and to the School Trust.

[Redacted]

1

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RECEIVED

JUN 27 2011

DNRC CONRAD UNIT

Eric Eneboe
Montana DNRC Conrad Field Office
600 S. Main Suite 10
P.O. Box 961
Conrad, MT 59425

June 25, 2012

Dear Eric,

5

[Redacted]

[Redacted]

[Redacted]

[Redacted]

[Redacted]

[Redacted]

[Redacted]

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[Redacted]

[Redacted]

[Redacted]

We suggest to the state that any permit that allows Primary Petroleum to explore on state land along the Rocky Mountain Front include three financial incentives that will motivate them to stick to their plan:

[Redacted]

2

[Redacted]

4

[Redacted]

Thank you.

Sincerely,

Steve Hutton

Lisa Schmidt

Steve Hutton & Lisa Schmidt
564 Graham Ranch Lane
Conrad, MT 59425

From: Dave Hanna [<mailto:dhanna@TNC.ORG>]
Sent: Friday, June 29, 2012 9:51 AM
To: Eneboe, Erik
Subject: Pendroy 3-D Seismic/Teton 3-D Seismic

June 29, 2012

Pendroy 3-D Seismic/Teton 3-D Seismic

Erik Eneboe
DNRC, Trust Lands Management Division
P.O. Box 961
600 South Main, Suite 10
Conrad, MT 59425

Dear Mr. Eneboe,

I am writing to provide comments on the Pendroy 3-D Seismic/Teton 3-D Seismic EA.

The proposed seismic operation area boundary includes private lands owned by The Nature Conservancy (TNC) and private lands on which TNC holds conservation easements. Some of the DNRC parcels are adjacent to these private lands where we hold a conservation interest. As such, we are concerned about the impact of the proposed activity on both the state parcels as well as the surrounding area.

2 [Redacted]

Other recent seismic surveys I have observed in the area incorporate an intensive pattern of source and receiver lines, which will require a significant amount of off-road vehicular traffic, including heavy vibroseis trucks, to implement. [Redacted]

2 [Redacted]

2 & 3 [Redacted]

1 [Redacted] Some of these impacts can be avoided or mitigated, although given the diversity of values and the intensity of the proposed activity some impacts are inevitable.

Basic precautions to reduce impacts of vehicular traffic include limiting off-road travel to only essential travel, [Redacted]

3 [Redacted]

1 [Redacted]

Currently, the area within the proposed seismic survey boundary is mostly free of noxious weeds. The Rocky Mountain Front Weed Roundtable could provide data on known noxious weed locations in the proposed project area. However, this data is undoubtedly incomplete and should not be solely relied upon for avoidance of noxious weeds.

1

[Redacted text block]

5

[Redacted text block]

2

[Redacted text block]

2

[Redacted text]

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[Redacted text]

1

[Redacted text]

[Redacted text]

3

[Redacted text]

1

[Redacted text]

Thank you for the opportunity to comment. If you have any questions regarding my comments or need additional information please contact me.

Sincerely,

David Hanna
Rocky Mountain Front Science and Stewardship Director
The Nature Conservancy
PO Box 825
Choteau, MT 59422
406-466-5299

RECEIVED

JUN 29 2011

To: Department of Natural Resources and Conservation
From: Frank S. Vitale

DNRC CONRAD UNIT

Topic: my comments on The Leasing and
exploration of oil and gas on state lands on
The Rocky Mountain Front.

Well here we go again, oil and gas exploration
on The Rocky Mountain Front. This time its
state lands. I get heart burn just thinking about
it.

They tell us its just exploratory, but I don't
believe it. They also tell us there is no impact
on The environment and The wildlife.

Its The same old story, same old lies, same
old bullshit. I remember back to The early 1980's
and all The seismic Trucks Thumping and Rumbling
Thru The mountains and country side. I also
remember all The helicopters and The blasting on
The ridge tops. Then there was The Absurd
Threats to "Bomb" The Bo D Marshall
wilderness.

5

There is no mitigation ⁵²strong enough to counter

The impacts oil and gas development will have on this most incredible landscape.

My wife and I own land on the Rocky Mountain Front, adjacent to state lands, and all this talk about oil and gas development has us very worried and concerned.

We plan on having a water well drilled soon.

4 [REDACTED]

5 [REDACTED]

2 [REDACTED]

Regardless of what the oil and gas industry says, oil development is dirty, disruptive business. The Rocky Mountain front is not the place for this type of industrial development.

5 [REDACTED]

Sincerely,
Frank S. Utale

Fairways / Primary Seismic Proposal Public Meeting Comments and Responses

1. Christy Clark – DNRC had a fiduciary responsibility to school trust and cannot see why this project should not be approved. Supports project approval

See Response to Public Comments section in Attachment C of the EA (Response #5).

2. Lisa Schmidt – Past performance of Primary seismic operations on her ranch is poor. Mentioned the following issues: timing is important, creek crossings with equipment can cause resource damage, excessive driving on the landscape is a problem, and garbage and lath left behind after the project is completed is a problem. Recommended water quality and quantity monitoring be implemented. Also suggested \$25.00 per acre financial incentive that the seismic companies would pay to land owners to make sure rules are followed. Seismic operations resulted in coyotes moving from field and hunting lambs, resulting in a 15% reduction of the flock.

See Response to Public Comments section in Attachment C of the EA (Response #5).

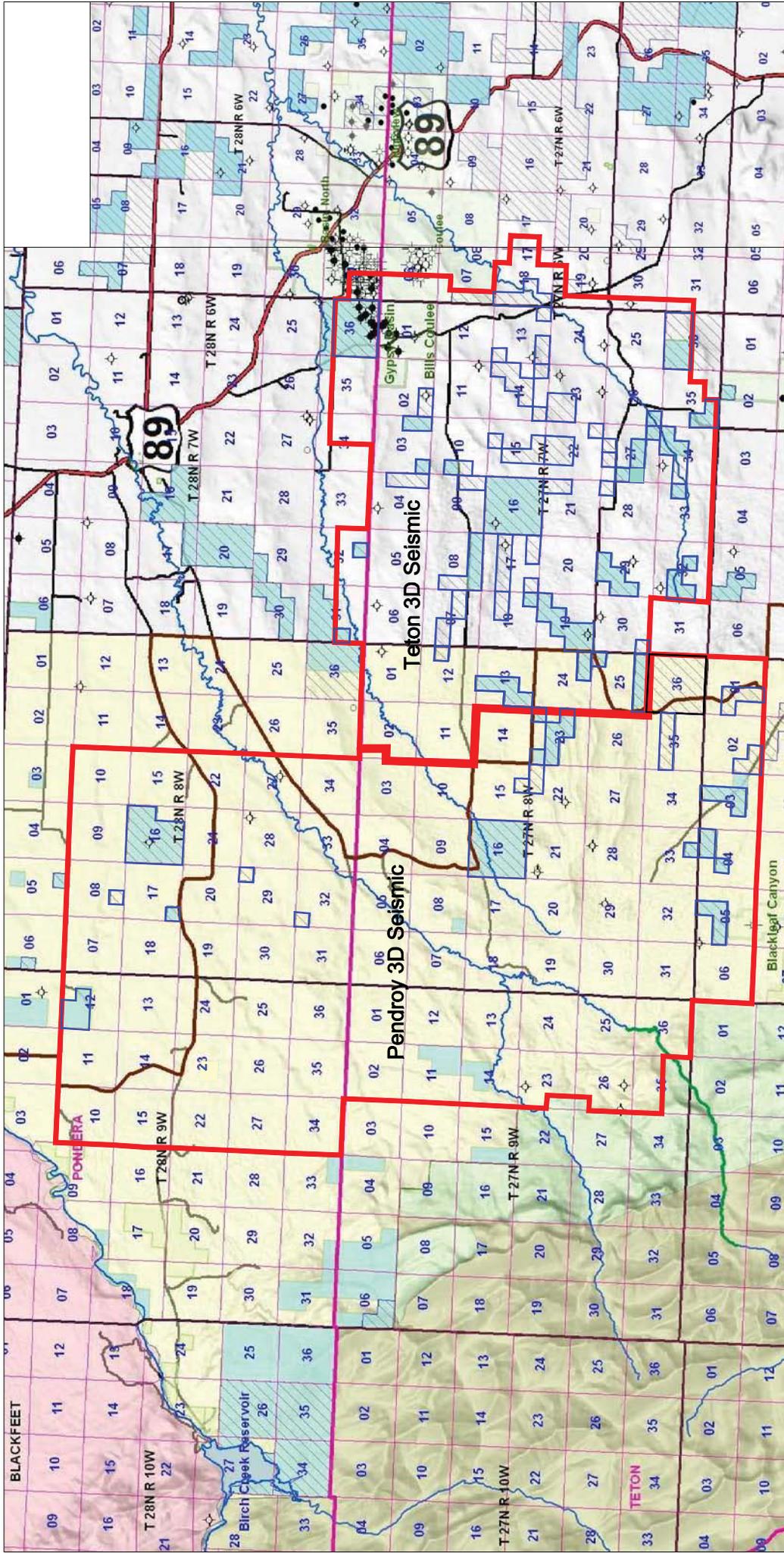
3. Un-named woman – expressed concerns about noxious weeds being introduced / spread along the RM front as a result of the proposed seismic operations.

See Response to Public Comments section in Attachment C of the EA (Response #1).

4. Kaylene Larson – had a positive experience with the Primary Petroleum on her family ranch at Bynum which occurred last winter. No trash found, no lingering impacts.

Attachment D
Location Map

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Pendroy 3D Seismic - Fairways Exploration & Production

Total Seismic Shoot Area = 51,980 Acres
 Total TLLMS Minerals Area = 3,310 Acres (6.4%)
 Total TLLMS Surface Area = 2,650 Acres (5.1%)

Teton 3D Seismic - Primary Petroleum

Total Seismic Shoot Area = 30,000 Acres
 Total TLLMS Minerals Area = 6,140 Acres (20.5%)
 Total TLLMS Surface Area = 3,360 Acres (11.2%)

-  - State Owned Surface
-  - State Owned Minerals
-  - State Owned Surface & Minerals

**COMBINED PENDROY & TETON
 3D SEISMIC PROPOSALS
 FAIRWAYS EXPLORATION
 & PRIMARY PETROLEUM**

DNRC - Trust Lands Division | Date: 5/22/12
 Drawn: TET | Conrad Unit Office

