

ENVIRONMENTAL ASSESSMENT

Project Name:	Seismic Permit #1566 – Deep Creek South 3D
Proposed Implementation Date:	Beginning October 13, 2011 and ending November 4, 2011
Proponent:	St. Croix Seismic LLC, C/O Mark Kinghorn, on behalf of LXL Consulting, Ltd., 4335 Johnny Creek Road, Pocatello, Idaho 83304 (permit agent) Tesla Exploration LTD, 4500 8A Street NE, Calgary, AB T2P 4J8 Tesla-Conquest, Inc., 6430 S. Fiddlers Green Circle, Suite 100, Greenwood Village, CO. 80111 (seismic company) Primary Petroleum, Suite 800, 744 4 th Ave SW, Calgary, AB T2P 3T4 (Oil and Gas Lessee)
Location:	<u>Township 23 North, Range 7 West</u> Section 8: N $\frac{1}{2}$ SE $\frac{1}{4}$ Section 14: S $\frac{1}{2}$ NW $\frac{1}{4}$, SW $\frac{1}{4}$ Section 15: ALL Section 16: ALL Section 22: E $\frac{1}{2}$ Section 23: N $\frac{1}{2}$ SW $\frac{1}{4}$ Section 25: SW $\frac{1}{4}$ SW $\frac{1}{4}$ Section 27: SE $\frac{1}{4}$ NE $\frac{1}{4}$ Section 35: N $\frac{1}{2}$ N $\frac{1}{2}$ Section 36: N $\frac{1}{2}$, Part N $\frac{1}{2}$ S $\frac{1}{2}$ <u>Township 24 North, Range 7 West</u> Section 36: S $\frac{1}{2}$, Part N $\frac{1}{2}$ State Land – 3,250 acres
County:	Teton
Trust:	Common Schools, Capitol Buildings (sec 25 only)

I. TYPE AND PURPOSE OF ACTION

St Croix Seismic LLC, LXL Consulting LTD and Tesla Exploration LTD on behalf of Primary Petroleum have applied for a 3D seismic permit on 3,250 acres of state lands listed above. The total project area consists of 14,130 acres (3,250 acres of state land and 10,880 acres of private land). This Environmental Assessment is intended exclusively for the previously listed state owned lands. The proposed seismic project will likely proceed on private land regardless of state involvement. DNRC has no authority over activities on private land. The seismic contractor anticipates the entire exploration activity will take approximately one month regardless of whether state lands are included. The proposed 3D seismic operation over the entire 14,130 acres is scheduled to occur in 4 stages described below:

1. Staking and Surveying – Ground crews and/or crews on ATV's survey and stake land in order to precisely orient receiver lines and geophones as well as locate and avoid sensitive areas. (1 Week)

2. Placement of Receiver Lines and Equipment – A helicopter, ATVs, and ground crews will transport receiver cables, data collectors, batteries and geophones along receiver lines. (<7 Days Concurrent with Seismic Shoot)
3. Conduct Seismic Shoot – 4 servo-hydraulic vibroseis trucks will be used to create the vibratory energy source at each source point. Receiver lines will be removed as needed via ATV crews. (7-12 Days)
4. Finish removal of receiver lines and site cleanup – Project cleanup will proceed concurrently with the recording phase in which all pins, flags, and lath will be collected and site restored. (<7 Days)

II. PROJECT DEVELOPMENT

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

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

St. Croix Seismic – Landman / Permit agent
 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
 Teton County Commissioners
 Montana FWP, Gary Olson, Wildlife Biologist
 Montana FWP, Gary Bertellotti, Region 4 Manager
 Montana FWP, Brent Lonner, Wildlife Biologist
 Lazy F6 Ranch LLC
 Richard & Ryan Dejana
 Triple DJ LLC
 Warren Ulery, Etal
 Stephens Ranch LLC
 Jerry & Darlene Larson
 Doris E. & George R. McMurray
 Gollehon Ranch LLC
 Deep Creek Grazing Association
 Teton Prairie LLC
 Meadows Ranch Inc.
 Henry Jay Bouma
 Richard B. & Nancy J. Neal
 Steven A. Michel & Flourney C. Holland

Public Scoping notice published in the Choteau Acantha on September 7, 2011 and September 14, 2011.
 Public Scoping notice published at www.dnrc.mt.gov

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

The DNRC Trust Land Management Division has jurisdiction over this proposed activity on state land. A DNRC seismic exploration permit for the state lands, county permit, proof of qualification to conduct business in the State of Montana and bonding with the Secretary of State's office are 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 the 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

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| <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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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 along Willow Creek, Hay Coulee, and Deep Creek that is characterized by gray green and gray mudstone with red and purple interbeds.

The eastern edge of the disturbed belt, analogous to the Augusta Syncline, bisects the proposed shoot area from north to south. Folding associated with the Teton Anticline is located to the west in R8W. Nearest oil fields with significant oil production are located eighteen miles to the north and include Second Guess and Pondera Fields. All previous exploration wells within 12 miles of the proposed seismic project have been dry holes.

The soils and range sites within the proposed project area vary. Identified range sites within the project area include sub-irrigated, overland flow, thin silty, silty, shallow to gravel and saline lowland. The terrain is also varied from flat to gently rolling hills with intermittent coulees with steeper slopes adjacent to creeks. Soils throughout the project area are well vegetated (native range land and CRP) and very stable. Wet areas, wet coulee bottoms, riparian and steep slopes on state lands will be avoided. 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 or frozen 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. Standard special stipulations including no vehicle operation during wet or muddy conditions, no seismic testing on slopes greater than 25%, and no seismic testing in wet zones will minimize impacts. No significant or cumulative impacts to 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, one irrigation ditch, one livestock water well, several miles of buried water pipelines, 4 livestock water tanks, and 1 reservoir in the proposed project areas. Willow Creek is immediately adjacent on the north side of the project area. Deep Creek runs through the middle of the project area, with the majority of the creek traversing through private land. Deep Creek touches state land on 2 corners (in section 22 and 27). Quigley Coulee is immediately adjacent to the project area on the south side. No seismic activities are planned in the Willow Creek, Deep Creek and Quigley Coulee riparian areas. These riparian areas will be closed to all seismic activities on state land.

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 vibratory operations on state land. No drilling or blasting operations are planned or authorized for this project. Wet coulee bottoms and brushy coulees are also present in the proposed project area. Special stipulations in attachment A require no seismic activity within 100 feet of woody draws on state lands. This requirement will mitigate damage to these areas.

No important surface or groundwater resources will be impacted by the proposed project by utilizing the above special stipulations.

Other water quality and/or quantity issues will not be impacted by the proposed action.

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 significant 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.

The vegetation within the proposed project area consists primarily of native rangeland grasses, forbs, and shrubs. Seismic operations will occur when plants are dormant (late fall and/or early winter). Native rangeland vegetation is dominated by silty type 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. 327.2 acres of CRP is present in sections 22 and 23. The CRP acreage consists of introduced species dominated by crested wheatgrass, intermediate wheatgrass and alfalfa. The project area is relatively free of noxious weeds. Small patches and individual plants of Canada thistle 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. This will be mitigated by initially power washing all equipment prior to entering the project area, briefing crews for identification of noxious weeds, and avoidance of known infestations. The proponent is currently working with the appropriate County Weed Coordinator and the Rocky Mountain Front Weed Round Table on best management practices for this project. The oil and gas lessee is responsible for mitigating noxious weed issues that may arise as a result of this project.

ATV, foot traffic and vibroseis trucks will temporarily flatten native vegetation along source and receiver lines. No ground disturbing actions are planned or authorized. Trampled vegetation is expected to recover quickly and naturally. The stream corridors and woody riparian areas in and adjacent to Willow Creek, Deep Creek and Quigley coulee, woody draws, and all other wet coulees and/or riparian areas 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 Ross Baty. 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 Ross Baty. 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 the presence of cairns in sec 36, T23N, R7W, and stone circles in sec 27, T23N, R7W. These sites will be flagged and avoided. The seismic company will be provided with a map that indicates the areas where identified cultural features are located.

This type of seismic activity has very low impacts to historical, archaeological, and paleontological resources. The DNRC archaeologist, Patrick Rennie, has been contacted concerning the proposed state-land area and does not have any cultural resource concerns with this type of seismic exploration as long as the operations are restricted to dry soil conditions and identified cultural features are identified.

The proponent will be required by the special stipulations to avoid and report any historical, archaeological, 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, pickups, buggies, large vibroseis trucks, and a helicopter will be seen and possibly heard by people in the vicinity of the operations. The survey vehicles and equipment will only be visible during the seismic operation of approximately one month and therefore no long term effects to the aesthetics of this area will occur.

The state land is located approximately 7 to 12 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 existing county roads. The seismic operations activity will be temporary and no long term changes to the aesthetic 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.

IV. IMPACTS ON THE HUMAN POPULATION

- *RESOURCES potentially impacted are listed on the form, followed by common issues that would be considered.*
- *Explain POTENTIAL IMPACTS AND MITIGATIONS following each resource heading.*
- *Enter "NONE" if no impacts are identified or the resource is not present.*

14. HUMAN HEALTH AND SAFETY:

Identify any health and safety risks posed by the project.

The project area is in the occupied grizzly bear zone. The potential for a human / bear encounter will decrease as bears begin to move to hibernation areas as fall progresses. The proponent is coordinating with Montana FWP on briefing crews at safety meetings on bear awareness. A minimum ¼ mile buffer from brushy areas will be closed to seismic activities adjacent to Deep Creek and Willow Creek. Quigley Coulee will be closed to all seismic activities. 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. Below is a list of estimated personnel numbers and days spent completing various phases of the seismic project.

Survey	5 people	5-7 days
Seismic operations	50 people	7-15 days
Clean-up	10 people	3 days

The applicant will pay surface lessees \$1.00 per acre plus any additional required for actual damage to grazing land. This proposed seismic exploration project may increase or decrease the possibility of oil and gas drilling and development in the area. Any new activities proposed on state land will be subject to 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.

The proposed activity will create a limited number of jobs. These are already held by employees of the proponent.

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. However, autumn months typically have shorter days and higher humidity levels to help mitigate wildfire concerns. 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 will 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" publication provides general management guideline pertaining to seismic and oil and gas development along the Rocky Mountain Front. These guidelines and recommendations are being utilized where appropriate to mitigate identified wildlife concerns (see sections 8 and 9 of this EA). Previous DFWP's comments 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 operation could be completed in about one month.

The proponent must obtain a seismic permit from Teton County. 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 15 miles west of the project area. The Wilderness is located within the Lewis and Clark National Forest whose boundary is approximately 10 miles from 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. The east boundary of the area, known as the Baucus Withdrawal is located approximately 2 miles west of the west edge of the seismic project 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 locate within the withdrawal area boundary. All of the state lands in this seismic proposal are outside of the Baucus Withdrawal Area.

Legally accessible state lands are available for recreational uses with the purchase of a Recreational Use License or a DFWP Conservation License for hunting and fishing purposes. The majority of recreational use on state lands is hunting and fishing.

Below is a list of the state lands within the project area and the accessibility status.

<u>Township 23 North, Range 7 West</u>	<u>Accessible (yes or no)</u>
Section 8: N½SE¼	no – land locked
Section 14: S½NW¼, SW¼	yes – county road
Section 15: ALL	yes – county road
Section 16: ALL	yes – adjacent state land
Section 22: E½	yes – adjacent state land
Section 23: N½SW¼	yes – adjacent state land
Section 25: SW¼SW¼	yes – adjacent state land
Section 27: SE¼NE¼	no – land locked
Section 35: N½N½	yes – adjacent state land
Section 36: N½, Part N½S½	yes – county road

Township 24 North, Range 7 West

Section 36: S½, Part N½	no – land locked
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- 2,600 acres of state land are legally accessible
- 760 acres of state land are not legally accessible

The seismic permit area is within Hunting District 450. Below is a list of the big game hunting and upland bird hunting seasons.

----- **HD 450** -----

NOTE: The Teton-Spring Creek Cooperative Hunting Area (TSCA, formerly the Teton-Spring Creek Bird Preserve) offers a variety of weapons choices, depending upon proximity to residences. -Area Map and Rules available at FWP-R4 HQ 406-454-5840, in Great Falls.

Antelope License. Drawing only. Apply by June 1.

450-00: 250 licenses.

- Sep 03 - Oct 07 – Either-sex Antelope. Archery Only Season.
- Oct 08 - Nov 13 – Either-sex Antelope.

900-00: 5600 licenses. ArchEquip Only License.*

- Aug 15 - Nov 13 – Either-sex Antelope. ArchEquip Only.

Antelope B License. Drawing only. Apply by June 1.

450-10: 500 licenses.

- Sep 03 - Oct 07 – Doe/Fawn Antelope. Archery Only Season.
- Oct 08 - Nov 13 – Doe/Fawn Antelope.

General Deer License.

- Sept 03 - Oct 16 – Antlered Buck Mule Deer. Archery Only Season.
- Either-sex White-tailed Deer. Archery Only Season.
- Oct 22 - Nov 27 – Antlered Buck Mule Deer.
- Either-sex White-tailed Deer.

Deer B License. Drawing only. Apply by June 1.

450-00: 150 B licenses.

- Sept 03 - Oct 16 – Antlerless Mule Deer. Archery Only Season.
- Oct 22 - Nov 27 – Antlerless Mule Deer.

Deer B License. Purchase beginning August 8.

004-10: Single Region B licenses. Resident/Nonresident. Antlerless White-tailed Deer B License. Only valid all Region 4 HDs except HD 455.

- Sept 03 - Oct 16 – Antlerless White-tailed Deer. Archery Only Season.
- Oct 22 - Nov 27 – Antlerless White-tailed Deer.

General Elk License.

- Sept 03 - Oct 16 – Antlerless Elk. Archery Only Season.

Elk Permit. Drawing only. Apply by June 1.

401-15: 170 permits. Only valid in HDs 401, 403 and 450. ArchEquip Only.

- Sept 03 - Oct 16 – Either-sex Elk. Archery Only Season.

450-20: 5 permits.

- Sept 03 - Oct 16 – Either-sex Elk. Archery Only Season.
- Oct 22 - Nov 27 – Either-sex Elk.

Elk B License. Drawing only. Apply by June 1.

004-80: 2200 licenses. Resident/Nonresident Elk B License. Only valid on private and DNRC lands. Not valid on FWP WMAs. Valid in all Region 4 HDs except HDs 401, 410, 417 and 455.

- Sept 03 - Oct 16 – Antlerless Elk. Archery Only Season
- Oct 22 - Nov 27 – Antlerless Elk.

450-80: 30 licenses. Only valid in HD 450 and in HD 442 north of South and Main Forks of Deep Crk, and east of the Bob Marshall Wilderness boundary.

- Sept 03 - Oct 16 – Antlerless Elk. Archery Only Season.
- Oct 22 - Nov 27 – Antlerless Elk.

Upland Bird Season October 8 – January 1

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 early portions of the big game season. However, late season hunting opportunities will be available and remain unchanged. The project area is a mixture of private and state land, where private lands are not open to public hunting. Although 2,600 acres of state land are legally accessible for hunting, state ownership is generally scattered and large blocks 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.

The Settlement of Damages returns approximately \$4 per acre or \$13,440.00 to the Common Schools and Capitol Buildings Trust Accounts for seismic exploration on these tracts.

Proposed permit special stipulations are listed in attachment A.

DNRC received 10 written comments in response to the public scoping notice sent in the mail and published in two local newspapers. Attachment C contains the comments letters and emails and DNRC response.

EA Prepared By:	Name: Erik Eneboe	Date: October 12, 2011
	Title: Conrad Unit Manager, CLO, DNRC	

V. FINDING

25. ALTERNATIVE SELECTED:

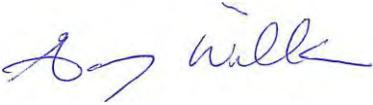
I have selected Alternative B which would grant the proponent authority to conduct a 3-D seismic survey on state lands located within the project area.

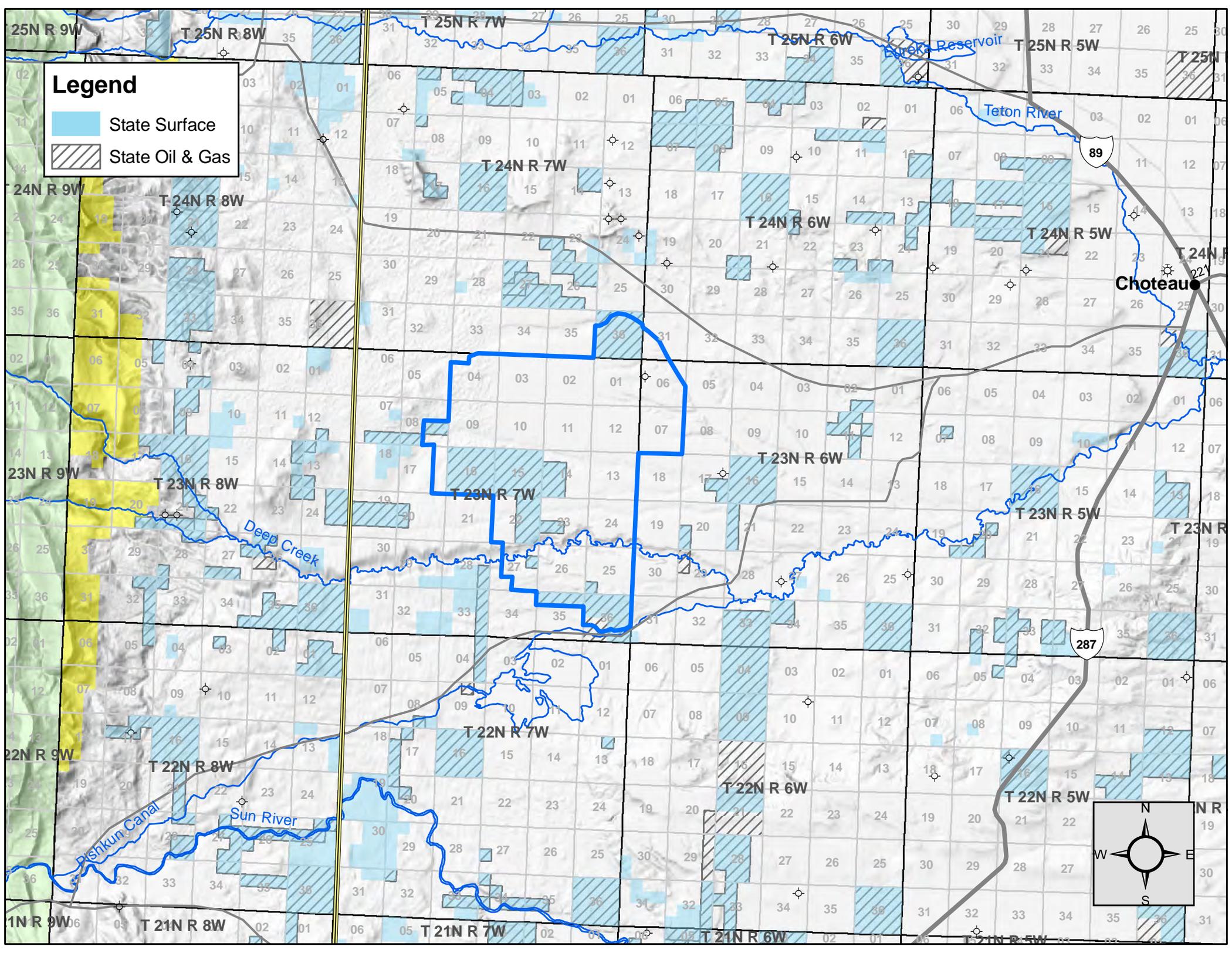
26. SIGNIFICANCE OF POTENTIAL IMPACTS:

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 approximately 25% of the overall project area and conducting activities on the state land will result in little additional impacts to those which will likely occur with or without participation by the state. Seismic surveys necessarily result in a greater amount of short-term human activity than would normally occur in an area which may temporarily displace some wildlife species. State lands within the project area are primarily high bench, grass lands which are common in the vicinity. The activity is proposed during a period of the year where there are few critical habitat requirements and species would most likely be expected to adapt to the short-term activity levels. The Deep Creek drainage is the possible exception which provides hiding cover for many wildlife species. A mitigation to prohibit seismic activity on state lands within ¼ mile of the brushy areas situated along Deep Creek will effectively protect the security values of the drainage bottom. Other mitigation measures which are common and effective have been incorporated in the proposal to minimize the potential for environment impact. 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.

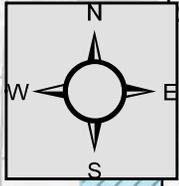
EA Approved By:	Name: Garry Williams
	Title: Area Manager, CLO, DNRC
Signature: 	Date: 10/12/2011



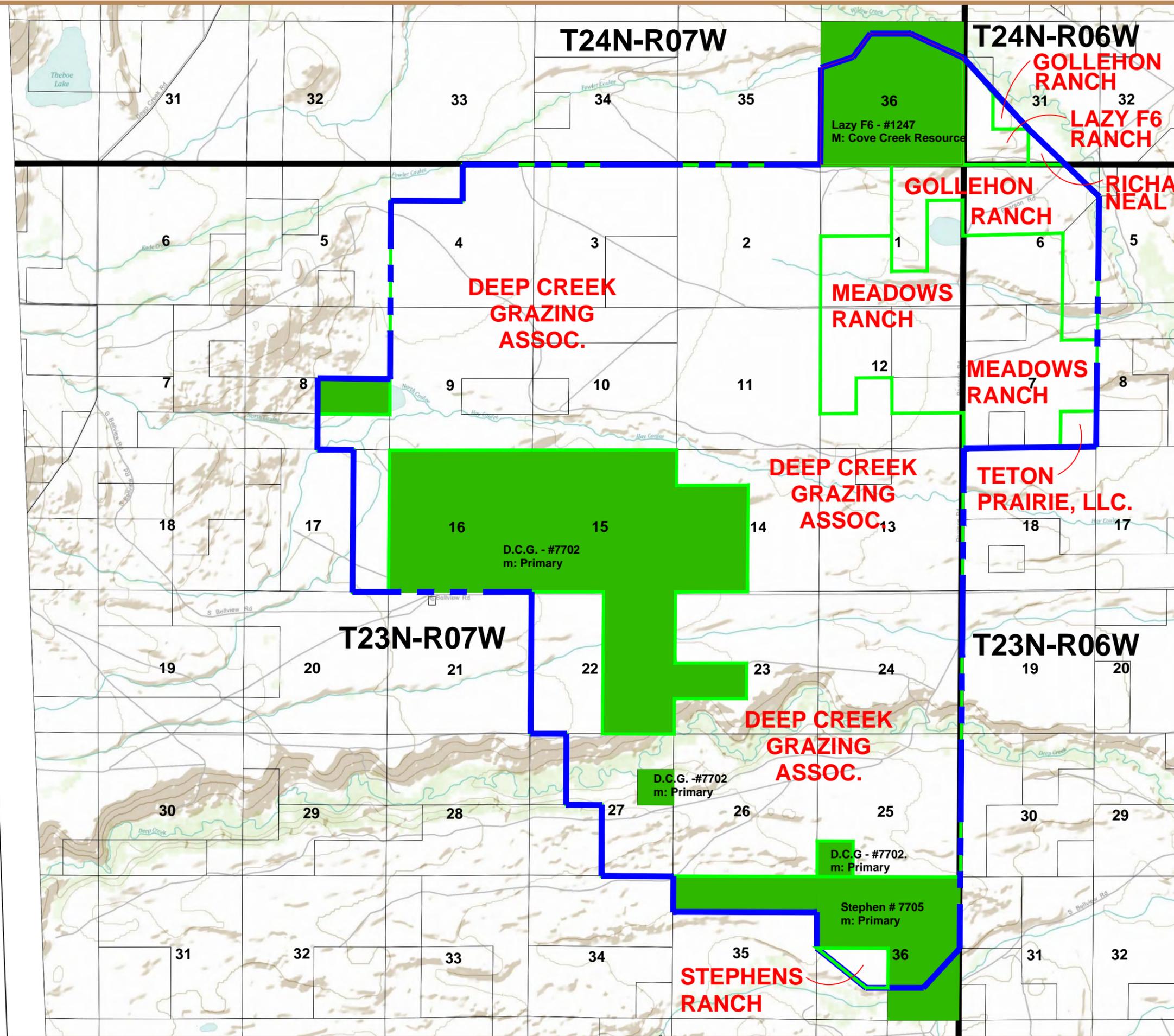
Legend

- State Surface
- State Oil & Gas

Choteau



Deep Creek South Surface Permit Map



LEGEND

-  Project Boundary
-  Permitted Lands
-  In Progress
-  No Access or Activity Allowed
-  Holding Out
-  Not Contacted Yet
-  State Lands

8/24/11



Not to Scale

ATTACHMENT A

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.
 - d. Provide crew training and briefings on noxious weed identification.
 - e. Avoid areas infested with noxious weeds.
3. The seismic permit is valid from October 13 to November 4. 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 November 4. Extension of the permit beyond November 4 requires DNRC written approval.
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 ¼ mile of the brushy areas situated along Deep Creek (Sections 22, 23, and 27, T23N, R7W) and Willow Creek (Section 36, T24N, R7W). No activities (including vehicle, ATV and/or foot travel) in riparian areas and/or dense brushy portions of the state land are authorized.
6. To minimize risk of disturbance and displacement of grizzly bears, aerial helicopter flights within ¼ mile of brushy areas on state land along Deep Creek and Willow Creek 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. Ground crews will be required to carry bear spray.
8. 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. On-site camping within the project area is prohibited.

9. To minimize risk of surprise bear encounters, cross country foot travel on state land by ground crews in nighttime hours between 7:00 pm and 7:30 am is prohibited. Crew members should remain in or near trucks during night time shifts.
10. 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 within 100 feet of wetlands and other riparian areas on or adjacent to state lands.
11. 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 paragraph #7 on the seismic permit.
12. No seismic activity will occur within 100 feet of woody draws on state lands. Permittee shall minimize impacts to woody vegetation.
13. 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.
14. 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 county(s) and has registered their bond with the Secretary of State's office.
15. Permittee shall contact surface lessee 48 hours prior to any seismic activity on state-owned lands.
16. Seismic activity may occur on dry ground only. No activity will be allowed during muddy conditions or conditions where rutting will occur.
17. 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.
18. There will be no off road traffic other than that necessary to accomplish the seismographic goals. Vehicles will not be allowed to traverse steep slopes greater than 25% or 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 on foot.
19. All gates will be closed and all fences that are taken down will be repaired as soon as possible. All flagging and 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.
20. Permittee shall settle all damages with the surface lessee within a reasonable time period following the completion of the seismic project.

Attachment B

Montana DNRC Deep Creek South Seismic Permit Proposal

Wildlife Analysis

Ross Baty

October 11, 2011

Introduction

The project area lies approximately 11 miles west southwest of Choteau, Montana and is comprised of 3,250 acres of state trust lands. In total, seismic exploration activities would occur on 14,130 acres of which 10,880 acres are neighboring private lands. Activities would likely occur on the private lands regardless of DNRC's decision to authorize similar activities on state trust lands. The project area is situated on 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 portions of Deep Creek and Willow Creek (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 wolf, mule deer, white-tailed deer, elk, moose, bald eagles, northern harrier, ferruginous hawks, sharp-tailed grouse, long-billed curlew, and numerous other grassland and riparian-associated terrestrial species. Long-billed curlew, bobolink, 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 2011).

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. Foot and mechanized activities associated with the proposed seismic exploration project would occur in addition to these existing activities.

Analysis Areas

For this project, environmental effects were analyzed at two different scales. Direct and indirect effects were analyzed for all DNRC parcels that comprise 3,250 acres. Cumulative effects were considered at an expanded scale within a 38,092-acre analysis area that encompassed 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 Activities that Could Result in Impacts

Under the proposed action, 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. 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. Approximately 21 total days of activity would be required to complete all stages of the project within the period from October 13 through November 4. However, rainy and/or windy conditions could prolong the duration that equipment and personnel could be required to remain on the survey site due to mandatory shut-down days. The extent to which the duration could have to be extended cannot be known. On shut-down days,

minimal activity would occur across the project area, thus, the total anticipated days of actual disturbance that could affect wildlife is anticipated to be 21.

Disturbance and temporary trampling of vegetation along survey and receiver routes would likely occur as a result of motorized activities during the proposed 21 day exploration period. These impacts 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 4 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. Helicopter flight routes would be designed to avoid Willow Creek and Deep Creek, and adjacent brushy zones on state lands at all times. However, activities would occur at a distance, frequency and intensity that could still displace some species from nearby areas on uplands and along Deep Creek and Willow Creek -- particularly those species most sensitive to motorized disturbance. 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 (eg. mule deer), whereas others (such as ground-nesting songbirds and other neotropical migrants) 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). The proposed period that activities would take place (October 13 to November 4) is well outside of any nesting period for birds, thus no disturbance-related or nest-destruction impacts would be anticipated.

No Action Alternative

Under the no action alternative proposed project activities would likely occur on the neighboring private lands that total approximately 10,880 acres. To a large degree, these private lands surround the 3,250 acres of state lands being proposed for exploration, thus, many of the disturbance impacts (particularly those that could affect large free-ranging mammal species such as deer, elk and grizzly bears) would likely occur regardless of the state's decision to conduct survey work on state trust lands. Activities on private lands would likely occur during the same approximate time period, but DNRC would have no control over agreements between the contractors and private surface and mineral owners or lessees. DNRC anticipates the seismic contractor would follow the state land mitigation measures on the private lands, but DNRC has no control over these activities. Activities are anticipated to take approximately 21 days, regardless of whether state lands are included.

Issues

Grizzly Bears -- There are concerns that: 1) grizzly bear habitat could be adversely affected by proposed activities resulting in lower suitability and quality, 2) grizzly bears could be disturbed and displaced from preferred feeding areas during critical nutritional periods, 3) proposed activities could result in bear/human encounters, and 4) bears could be attracted to unnatural food sources associated with crews resulting in removal of a problem bear.

Approximately 12,770 acres (90%) of the 14,130-acre total survey area occurs within the Northern Continental Divide Grizzly Bear Recovery Zone. Of the 3,250 acres of state lands included in this proposal, 2,570 (18% of total survey area) occur within the recovery zone boundary and 680 occur outside, but within occupied grizzly habitat along the Rocky Mountain Front (Wittinger 2002). Riparian vegetation and brushy sites along Deep Creek and Willow Creek provide foraging and resting sites for grizzly bears. Under the proposed action, no preferred feeding or resting sites would be physically altered

by seismic activities. Areas along Deep Creek and Willow Creek on state lands would be avoided. Some vegetation trampling associated with equipment placement would occur on upland sites, but would result in negligible direct, indirect or cumulative effects to habitats or foods preferred by bears.

Disturbance associated with mechanized seismic activities and the increased presence of humans particularly in areas along Deep Creek could cause several 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. However, towards the end of the proposed period of activity (i.e., November) it is expected that bears would begin moving toward higher elevations to denning areas. Mitigations designed to prohibit all ground and aerial activities within 1/4 mile of the edge of the brush zone along Deep Creek and Willow Creek on or adjacent to state lands would lessen the potential for displacement of grizzly bears from preferred sites and minimize risk of human/bear encounters. Nonetheless, given that motorized activities would occur at a distance, frequency and intensity that could displace grizzly bears from some portions of the area along Deep and Willow creeks some potential for minor adverse impacts to grizzly bears would be present. While the duration of project activities would occur within 21 days, this period coincides with an important feeding period for grizzly bears (eg. September 1 to November 30). During this period bears are putting on fat reserves before winter. Given the types of activities that would occur, and the limited duration that the activities would occur, minor adverse direct, indirect and cumulative effects to several individual grizzly bears would be possible due to their possible displacement from potential feeding areas along Deep and Willow creeks.

As ground crews would be required to set up and take down equipment in the project 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. Crews would also be prohibited from straying from closed vehicles during nighttime hours, and would be prohibited from entering or going near brushy sites along Deep and Willow creeks on state land. Given the required mitigations and short duration of project activities, minor adverse direct and cumulative effects to grizzly bears would be expected.

Grizzly bears are attracted to many unnatural foods and substances, which can result in their habituation and subsequent removal from the population. 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 state project area to minimize the potential of attracting and rewarding grizzly bears with unnatural foods. Given the required mitigations and short duration of project activities, minimal adverse direct, indirect and cumulative effects to grizzly bears would be expected.

Big Game Habitat and Disturbance (elk, mule deer, white-tailed deer, moose) -- As a result of proposed activities, there are concerns that: 1) these big game species could be disturbed and displaced from important wintering areas during the critical winter period, 2) there are concerns that these species could be disturbed and displaced in spring during calving, 3) there are concerns that these species may be permanently displaced, and 4) there are concerns that proposed activities could disrupt recreational activities -- particularly during hunting season.

Under the proposed action, activities would take place only during the last half of October and the first four days of November, minimizing concerns regarding disturbance of wintering animals and calving animals in spring during those two critical periods. Recreational activities could be disrupted to some degree during the last part of October and first portion of November. As activities would occur for only 21 days 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 that could affect success of some local hunters. As activities would be completed prior to the winter period when big game animals are undergoing stress from severe weather conditions, no adverse effects to wintering animals would be anticipated. Given the types of activities that would occur, the limited duration of the proposed activities, and the less critical season when activities would take place, minimal direct, indirect and cumulative effects to any of the four big game species listed above would be anticipated.

Wetlands and Aquatic Species -- There are concerns that activities associated with the proposed action could adversely affect sensitive wetland communities and riparian habitats and associated aquatic species that may occur in the project area.

Under the proposed action, no road construction would be required and no activities would take place in streams or sensitive wetland communities. Vehicles would be prohibited from entering wet sites and crossing sensitive wetlands and riparian areas on state lands. As a practical matter, vehicles would not cross or occupy wetland and riparian areas on private land either. Thus, minimal risk of direct, indirect or cumulative effects to sensitive wetland plant and animal communities and aquatic species would be expected.

Threatened, Endangered and Sensitive Species -- The following is a list of federally listed threatened or endangered species, and state-listed sensitive species that are likely to occur in some portion of lands administered by the DNRC Central Land Office. The information and sources used to evaluate impacts related to the following species included: MNHP species occurrence record search (10/05/11), 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.

CHECKLIST FOR ENDANGERED, THREATENED AND SENSITIVE SPECIES
CENTRAL LAND OFFICE

Threatened and Endangered Species	[Y/N] Potential Impacts and Mitigation Measures N = Not Present or No Impact is Likely to Occur Y = Impacts May Occur (Explain Below)
Grizzly Bear (<i>Ursus arctos</i>) Habitat: recovery areas, security from human activity	[Y] -- See detailed analysis above in this report.
Lynx (<i>Felis lynx</i>) Habitat: mosaics--dense sapling and old forest >5,000 ft. elev.	[N] -- Habitat suitable for use by Canada lynx does not occur within the project area or cumulative effects analysis area. Thus, no direct, indirect, or cumulative effects to lynx would be anticipated.

<p style="text-align: center;">DNRC Sensitive Species</p>	<p>[Y/N] Potential Impacts and Mitigation Measures</p> <p>N = Not Present or No Impact is Likely to Occur</p> <p>Y = Impacts May Occur (Explain Below)</p>
<p>Bald Eagle (<i>Haliaeetus leucocephalus</i>)</p> <p>Habitat: late-successional forest <1 mile from open water</p>	<p>[N] Bald eagles are present along the Rocky Mountain Front and Pishkun Reservoir located approximately ½ mile south of the project area. However, habitat suitable for nesting eagles does not occur in the project area or cumulative effects analysis area. Any appreciable use of the project area would likely be confined to the winter period when eagles would likely be foraging in the area on carrion. Any disturbance associated with project activities would occur outside of the normal nesting period for eagles (Feb. 1 - Aug. 15). Thus, no direct, indirect or cumulative effects to bald eagles would be anticipated.</p>
<p>Gray Wolf (<i>Canis lupus</i>)</p> <p>Habitat: ample big game pops., security from human activity</p>	<p>[N] No active wolf packs or dens are known to occur within the project area or cumulative effects analysis area, and project activities would occur outside of the sensitive spring denning season (April 1 to June 30). Thus, no direct, indirect or cumulative effects to gray wolves would be anticipated.</p>
<p>Black-Backed Woodpecker (<i>Picoides arcticus</i>)</p> <p>Habitat: mature to old burned or beetle-infested forest</p>	<p>[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 anticipated.</p>
<p>Black-tailed Prairie Dog (<i>Cynomys ludovicianus</i>)</p> <p>Habitat: Prairie, shortgrass prairie, badlands</p>	<p>[N] No known prairie dog colonies occur within the project area or cumulative effects analysis area. Thus, no direct, indirect, or cumulative effects to prairie dogs would be anticipated.</p>
<p>Flammulated Owl (<i>Otus flammeolus</i>)</p> <p>Habitat: late-successional ponderosa pine and Doug.-fir forest</p>	<p>[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 anticipated.</p>
<p>Greater Sage-grouse (<i>Centrocercus urophasianus</i>)</p> <p>Habitat: sagebrush semi-desert</p>	<p>[N] Developed sagebrush communities do not occur on the project area or 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 anticipated.</p>
<p>Ferruginous Hawk (<i>Buteo regalis</i>)</p> <p>Habitat: prairies and badlands</p>	<p>[Y] Ferruginous hawks have been observed in the vicinity of the project area and potential nesting habitat may be present. Project activities would occur outside of the critical nesting season (April 1-July 30) (USFWS 1987). However, there is some</p>

	<p>potential for displacement of several individuals due to ground and aerial helicopter activities should hawks be present near active work zones. By conducting activities late in late October to early November, the potential for displacement and adverse effects to ferruginous hawks would be minimized. Given the season activities would occur, the types of activities that would occur, and the short 21 day duration of planned activities, minor adverse direct, indirect, and cumulative effects to ferruginous hawks would be anticipated.</p>
<p>Long-billed Curlew (<i>Numenius americanus</i>) Habitat: moist meadows and dry upland prairies</p>	<p>[N] Long-billed curlews have been observed in the vicinity of the project area and potential nesting habitat may be present. Project activities would occur outside of the spring nesting season for curlews and most birds depart for wintering grounds by the end of August (USFWS 2009:32). By conducting activities in from mid October to early November, the potential for adverse effects associated with displacement and nesting would be eliminated. Thus, no adverse direct, indirect, or cumulative effects to long-billed curlews would be anticipated.</p>
<p>McCown's Longspur (<i>Rhynchophanes mccownii</i>) Habitat: dry short-grass plains</p>	<p>[N] The project area occurs within the known distribution of McCown's longspurs and inclusions of potential nesting habitat are likely present in the project area and cumulative effects analysis area. Project activities would occur outside of the spring nesting season. By conducting activities late in mid October to early November, the potential for adverse effects associated with nest disturbance and displacement would be minimized. Given the season activities would occur, the types of activities that would occur, and the short 21 day duration of planned activities, minimal adverse direct, indirect, and cumulative effects to McCown's longspurs would be anticipated.</p>
<p>Sprague's Pipit (<i>Anthus spragueii</i>) Habitat: native medium to intermediate height prairie</p>	<p>[N] 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. Project activities would occur outside of the critical spring nesting season. By conducting activities late in mid October to early November, the potential for adverse effects associated with nest disturbance and displacement would be minimized. Given the season activities would occur, the types of activities that would occur, and the short 21 day duration of planned activities, minimal adverse direct, indirect, and cumulative effects to Sprague's pipits would be anticipated.</p>
<p>Harlequin Duck (<i>Histrionicus histrionicus</i>)</p>	<p>[N] Harlequin ducks have been documented in streams along the Rocky Mountain Front, however, no occupied streams are known to occur in the</p>

<p>Habitat: white-water streams, boulder and cobble substrates</p>	<p>project area. Further, project activities would occur outside of the nesting season for harlequins and proposed activities would occur after most harlequins have migrated by the end of September. By conducting activities in mid fall and by prohibiting activities on state trust lands near Deep Creek, the potential for any adverse effects to harlequin ducks would be minimized. Minimal adverse direct, indirect, or cumulative effects to harlequin ducks would be anticipated.</p>
<p>Mountain Plover (<i>Charadrius montanus</i>) Habitat: short-grass prairie, alkaline flats, prairie dog towns</p>	<p>[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 anticipated.</p>
<p>Northern Bog Lemming (<i>Synaptomys borealis</i>) Habitat: sphagnum meadows, bogs, fens with thick moss mats</p>	<p>[N] The project area is outside of the known distribution of bog lemmings, thus no impacts to bog lemmings would be anticipated. 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 anticipated.</p>
<p>Peregrine Falcon (<i>Falco peregrinus</i>) Habitat: cliff features near open foraging areas and/or wetlands</p>	<p>[N] Peregrine falcon nesting habitat and foraging habitat occurs along the Rocky Mountain Front. However, cliff features suitable for nesting sites do not exist within the project area or cumulative effects analysis area. By conducting activities in mid fall the potential for any adverse effects to peregrine falcons would be minimized. Thus, the potential for adverse direct, indirect, or cumulative effects to peregrine falcons would be minimal.</p>
<p>Pileated Woodpecker (<i>Dryocopus pileatus</i>) Habitat: late-successional ponderosa pine and larch-fir forest</p>	<p>[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.</p>
<p>Townsend's Big-Eared Bat (<i>Plecotus townsendii</i>) Habitat: caves, caverns, old mines</p>	<p>[N] Caves suitable for use by Townsend's big-eared bats do not occur within the project area or cumulative effects analysis area. Thus, no direct, indirect, or cumulative effects to bats would be anticipated.</p>

Mitigations

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 affected state trust lands to occur from October 13 through November 4. Operating beyond the November 4 date could conceivably be requested by the proponent in the case of shutdown periods caused by rain or wind events that would prohibit operations. By requiring all associated actual field activities to occur during a brief 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 sensitive spring and fall seasons for grizzly bears during periods of their greatest nutritional stress and need. Similarly, by requiring activities to occur during this brief period in mid fall, any potential for disturbance and displacement to wintering elk and deer herds can be avoided during their period of greatest stress from December to April. Work would also be conducted in a sequential manner (i.e., one portion surveyed before moving to the next portion), which would lessen the scope of impact zones at the time survey work would be conducted. In order for activities to occur within the narrowest window possible, an allowance for workers in closed vehicles to operate 24 hours per day would be required and authorized. As a precautionary measure to protect human safety and grizzly bears, ground crews would not be permitted to travel away from closed vehicles during nighttime hours.

Mitigations that would be required before permitting would be authorized would include:

The mitigations that are detailed below apply directly to the state lands proposed for inclusion in the seismic exploration project area. The seismic contractor anticipates completing the entire seismic activities within an approximate 21 day time frame. However, the DNRC has no control over seismic activities on private lands.

Human Safety and Grizzly Bear Protection

- To minimize risk of disturbance and displacement of grizzly bears and surprise bear encounters, prohibit ground activities within 1/4 mile of the brushy area situated along Deep Creek (secs. 22, 23, and 27) and Willow Creek (sec. 36), and prohibit ATV and foot travel into dense, brushy portions of the survey area.
- To minimize risk of disturbance and displacement of grizzly bears, prohibit aerial helicopter flights within 1/4 mile of brushy areas situated along Deep Creek and Willow Creek.
- For human safety, brief staff conducting ground activities on working safely in bear habitat and train in the effective use of bear spray.
- For human safety while working in occupied grizzly bear habitat, require ground crews to carry bear spray.
- 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 at all times when unattended.
- To minimize risk of bear habituation and human/bear encounters, prohibit on site camping within the project area.
- To minimize risk of surprise bear encounters, prohibit cross country foot travel by ground crews in nighttime hours between 7:00 pm and 7:30 am. Crew members should remain in or near trucks.
- To reduce disturbance for grizzly bears during the most critical feeding periods in spring and fall, restrict the allowable period of ground and aerial activities to the extent weather conditions allow to occur from October 13 to November 4.

-To minimize potential for disturbance and adverse impacts to important bear foods and feeding areas, prohibit use of vehicles in wetlands and riparian areas.

Other Terrestrial Species

-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 October 13 to November 4. To ensure activities can be completed during this condensed time period, allow 24 hour operations to occur as needed.

-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. Oil and gas lessees shall be responsible for any noxious weed issues that may arise.

-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

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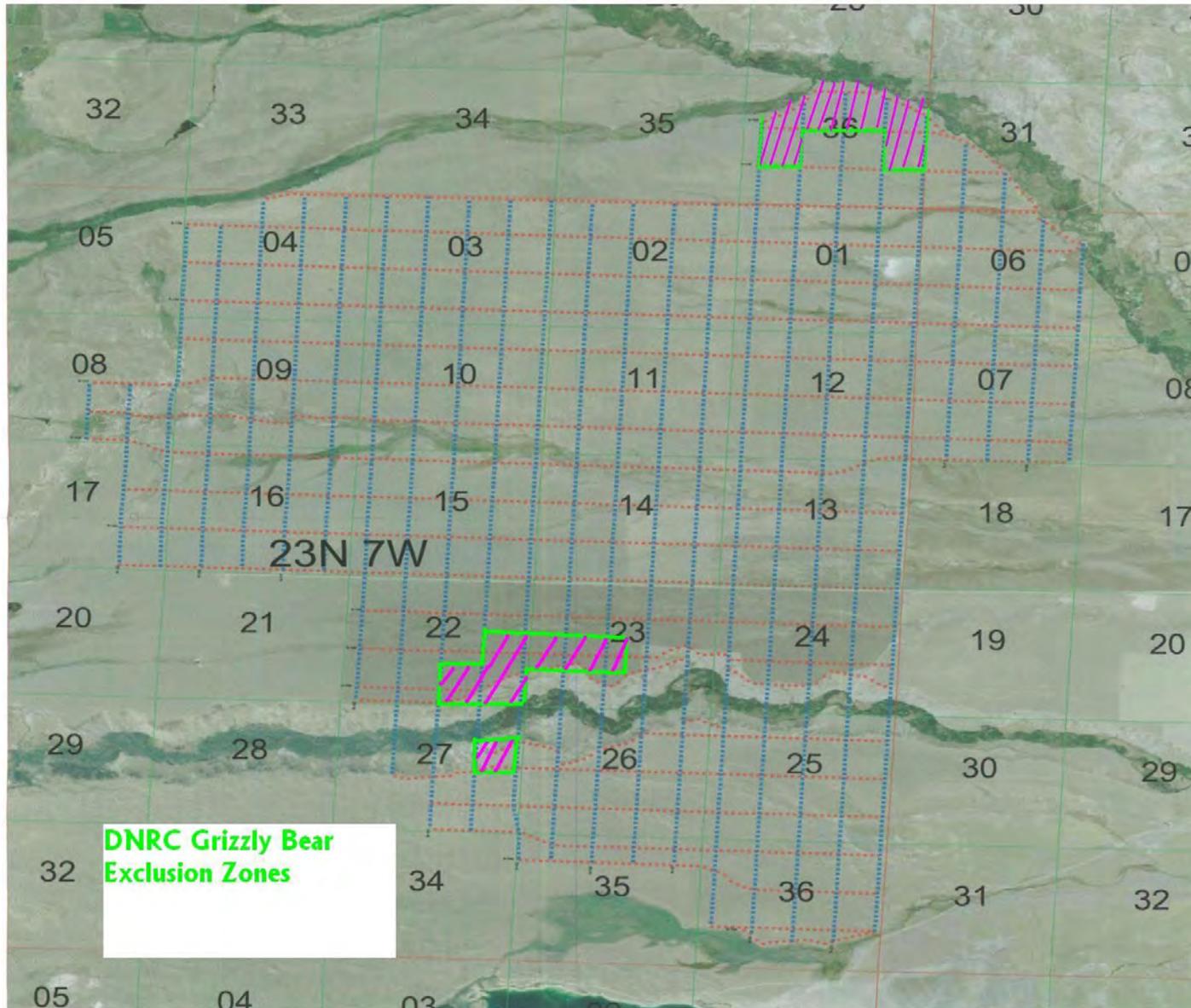
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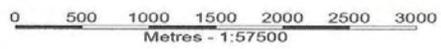


Deep Creek South 3D
Primary Petroleum / LXL Consulting

August 18/2011
Version 1.3
Grid Plot



**DNRC Grizzly Bear
Exclusion Zones**



Parameters

Receiver Line Interval	360'
Source Line Interval	480'
Receiver Interval	60'
Source Interval	60'
Patch	14 X 9

Attachment C

Responses to Comments:

1. **Soil and Vegetation Concerns** – Operations will be conducted during dry periods, which will aid in mitigating disturbance (See sections 4 and 7 of the EA). No physical ground disturbing actions are planned. 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. (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). 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 will be avoided (Section 7).
2. **Wildlife and Habitat Concerns** – 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 Ross Baty. This analysis and mitigations are found in attachment B
3. **Cultural, Aesthetic, and Recreational Concerns** – See sections 10, 11, & 20. Seismic crews will be required by stipulations to avoid and report any historical, archaeological, and paleontological resources encountered. Identified features will be flagged and avoided. DNRC archaeologist, Patrick Rennie, does not have cultural resource concerns with the seismic exploration provided activities occur on dry soils.
No long term aesthetic impacts are expected as a result of the proposed action. Legally accessible state lands are available for recreational uses with the purchase of a Recreational Use License or a DFWP Conservation License for hunting and fishing purposes.
4. **Water and Air Concerns** – See sections 5 & 6. All seismic operations 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 vibratory operations on state land. All surface waters and riparian areas will be avoided on state lands by a minimum of 300'. 100' buffer zones are to be maintained around woody draws on state land.
Mitigations will be in place to prevent disturbance to soils, thus no cumulative effects to the air quality are anticipated.
5. **General Oil and Gas Concerns** – See Part I – Type and Purpose of Action. This EA focuses on the portion of the proposed activity which occurs on state surface and mineral ownership. State lands constitute approximately 23% of the total seismic project area. DNRC has no authority over the proposed activity occurring on private surface and mineral ownership, which makes up 77 % of the project area. Seismic exploration will likely occur on the private mineral ownership regardless of whether state lands are involved.

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. All future well development will be analyzed under a separate Environmental Assessment. See Part I of the EA.

Eneboe, Erik

From: Casey Perkins [noxious.weeds@gmail.com]
Sent: Sunday, October 02, 2011 10:33 AM
To: Eneboe, Erik
Subject: Deep Creek South 3-D Seismic

September 30, 2011

Erik Eneboe
Conrad Unit Manager DNRC - Conrad Unit Office
P.O. Box 961 600 South Main, Suite 10
Conrad, MT 59425

Dear Mr. Eneboe,

1 I am writing to provide comments on the Deep Creek South 3-D Seismic EA. The proposed seismic operation boundary includes land within the boundary of the Rocky Mountain Front Weed Roundtable (Roundtable) project area. The Roundtable holds a vested interest in the prevention of noxious weed spread on both state and private parcels. As such, we are concerned about the impacts of the proposed activity.

1 Specifically, the Roundtable is concerned with the disturbance to native rangeland and riparian areas that may be caused by the vehicular traffic required to conduct the survey. We are concerned that noxious weeds may be introduced by vehicles coming from outside the area, or spread by vehicles driving through existing infestations. Some of these impacts can be avoided or mitigated by taking certain precautions.

1 Currently, the area within the proposed seismic survey boundary is mostly free of noxious weeds. Avoiding areas with known infestations will prevent spread from existing sources. The Roundtable could provide information on known noxious weed infestations within the project area and these areas should be avoided if possible. Thoroughly washing all vehicles prior to arriving at the site will help prevent the introduction of noxious weeds. Additionally, we ask that if vehicles must drive through infested areas, that they be cleaned before traveling on to other sites. It is also important for any staging areas for vehicles and other equipment be selected carefully to avoid infested areas. Other precautions that may be taken to avoid disturbance and the creation of new infestations are to limit activity to times when the soil is dry and to avoid vehicular travel in riparian and other wet areas such as ponds and potholes.

Even with these precautions, it is possible that the survey may cause the spread of noxious weeds. Therefore we ask that baseline information be collected to determine the extent of current infestations and provide a basis for future monitoring efforts. This would require that survey personnel be trained to identify the most common species of noxious weeds within the project area and that they collect information on weed presence along survey routes. Given the level of GPS and survey activity associated with this project, this could be easily accomplished without a significant impact on personnel time.

Thank you for the opportunity to comment. If you have any questions regarding my comments or need additional information, please contact Paul Wick, Roundtable Treasurer at 466-2155/noxweed@3rivers.net or Alan Rollo, Roundtable Secretary at 727-4437/arollo7@msn.com

Sincerely,

Casey Perkins
Executive Director
Rocky Mountain Front Weed Roundtable

--

Casey Perkins
RMF Weed Roundtable Coordinator
PO Box 663
Choteau, MT 59422

406-544-1093

noxious.weeds@gmail.com

Eneboe, Erik

From: kaylar [kaylar@3rivers.net]
Sent: Friday, September 30, 2011 1:48 PM
To: Eneboe, Erik
Subject: Primary Petroleum seismic permit

Dear Mr. Eneboe:

I strongly urge the DNRC to issue Primary Petroleum Corporation the seismic permit they request in regard to their survey in the Deep Creek drainage southwest of Choteau.

As a native Montanan and third-generation farmer-rancher and landowner, I greatly welcome responsible oil and gas exploration and drilling by conscientious and reputable companies.

Thank you very much.

Yours truly,

Kaylene M. Larson
1311 – 23 Rd. NW
P.O. Box 728
Bynum, MT 59419
406-466-2255

Eneboe, Erik

From: Dave Hanna [dhanna@TNC.ORG]
Sent: Friday, September 30, 2011 1:35 PM
To: Eneboe, Erik
Subject: Deep Creek South 3-D Seismic

September 30, 2011

Deep Creek South 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 Deep Creek South 3-D Seismic EA. The proposed seismic operation area boundary includes private land on which The Nature Conservancy (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.

The Notice of Intent does not identify a proposed seasonal timing for the seismic operation, so I am providing comments that reflect issues across seasons. Many potential impacts could be reduced or eliminated simply based on the timing of the operation.

The maps I have seen of the proposed seismic survey show 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. This vehicular traffic may displace wildlife and reduce habitat availability, destroy grassland bird nests, disturb cultural features, compact soils and damage vegetation, create rutting and trails, create erosion on steep slopes, introduce or spread noxious weeds, and reduce agricultural productivity. 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, avoiding time periods when soils are wet and can be easily damaged or rutted, avoidance of steep slopes, and avoidance of cultural features. In addition, procedures to eliminate the introduction and spread of noxious weeds are essential to protect agricultural and ranching enterprises.

Currently, the area within the proposed seismic survey boundary is mostly free of noxious weeds. Avoiding any areas with noxious weeds will prevent spread from these existing sources. Thoroughly washing all vehicles prior to arriving in the project area will help prevent new introductions of noxious weeds. Vehicles which are subsequently exposed to noxious weed sources, either within or outside the project area, could be again washed after exposure to prevent transport of noxious weeds. Additional precautions include minimizing off-road vehicle travel and ensuring that any staging areas are weed-free.

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. It would be beneficial if project personnel could identify noxious weeds and were able to map and avoid weeds they encounter. Given the level of GPS and survey activity associated with the project, it seems like this could be easily accomplished.

1 However, even with appropriate precautions, some introduction of noxious weeds could occur given the intensity of the proposed seismic survey, some inevitable ground disturbance, and the presence of noxious weed sources near the project area. Post-activity surveys in subsequent years could be conducted to locate and eradicate any new introductions.

2 The intensity of the proposed seismic survey is far greater than originally contemplated by the 1987 Interagency Rocky Mountain Front Wildlife Monitoring/Evaluation Program, Management Guidelines for Selected Species. These guidelines recommend that concurrently active seismic lines be spaced at least 9 air miles apart, and that activities avoid seasonally important wildlife habitats. Deep Creek, Willow Creek, and other riparian zones in the proposed project area provide important seasonal grizzly bear habitat. Avoidance of these features and seasonal restrictions on activity in adjacent areas could reduce impacts to grizzly bears. Similarly, seasonal avoidance of important habitat features for other wildlife species such as deer or antelope could reduce impacts to those species. Montana Fish Wildlife and Parks biologists could provide the most up-to-date information on habitat use and timing restriction recommendations.

2 The proposed project area includes extensive areas of native grasslands which support numerous grassland bird species, including several species of concern as listed by the Montana Natural Heritage Program. These include long-billed curlew, McCown's longspur, and Sprague's pipit. Sprague's pipit is also a candidate species for listing under the Endangered Species Act (ESA). In September 2010 the US Fish and Wildlife Service determined that Sprague's pipit warranted protection under the ESA, but that listing was precluded by higher priorities.

2 Based on 2005 point count data from private lands nearby the proposed project area, DNRC lands likely support all the above listed species. I observed McCown's longspurs and long-billed curlews on state lands in T23N R7W S15 and S16 in 2010. Predictive modeling based on survey data from 2006 suggests that DNRC lands in the project area provide extensive habitat for long-billed curlew and Sprague's pipit. I can provide maps or additional data that show this modeled expected distribution for DNRC lands if it would be useful. Avoidance of grassland habitat during the breeding season would reduce impacts to these species.

1 Wetlands and riparian zones, while only occupying a small proportion of the landscape, are critical features in this arid landscape. Soils and vegetation in these areas can often be easily damaged by heavy vehicles. Avoidance is the best strategy to reduce impacts to these features. There appear to be numerous small wetlands and riparian areas on DNRC lands in the proposed project area. These features are small, and should be able to be easily avoided. Some of these are mapped by the National Wetlands Inventory data; others could be identified and mapped as encountered in the field by project survey crews.

3 I am aware of numerous cultural features such as cairns and stone circles on private lands along the bench edge above the Deep Creek valley and in the glacial terrain in the southern portion of the proposed seismic survey area. It seems likely that similar features would also occur on state lands in these areas. These features could be identified and easily avoided since they are small.

1

It is my understanding that snow removal may be necessary if 3-D seismic operations are conducted in winter. Given the intensity of the source and receiver lines, this could create a significant network of ground disturbance that would damage soils and vegetation and serve as a vector for noxious weeds. If a winter time frame is considered for the proposed seismic operation, snow removal impacts could be avoided by restricting seismic activity to periods when the ground is snow-free and mechanized snow removal is not necessary. Due to the frequent high winds in the proposed survey area, snow-free periods are common in winter.

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

RANDALL L. WEEKS

SUITE 500
1550 SEVENTEENTH STREET
DENVER, COLORADO 80202
(303) 892-7358
randall.weeks@dqslaw.com

September 26, 2011

Montana Department of Natural Resources and Conservation
Trust Land Management Division
Minerals Management Bureau

Attention: Erik Eneboe, Conrad Unit Manager
DNRC - Conrad Unit Office
via e-mail to eenoeboe@mt.gov

Re: Notice of CGG Veritas Land Company of Intent to Perform Seismic Operations in Teton County, Montana ("the Veritas Seismic Program") – Comments of Randall L. Weeks

Ladies and Gentlemen:

Here is my enthusiastic support for the Veritas Seismic Program. As detailed in the Notice given by the Department, the Veritas Seismic Program presents a complete package of technological safeguards for environmental considerations.

I have acquired state oil and gas leases in this area for several years and continue to hold several. Nearly all have extensive restrictions on surface occupancy. Accordingly, my objective has been to nominate state leases which compliment adjacent private surface and minerals of local ranchers, thereby enabling access to drilling for minerals through horizontal or directional drilling. Each time I nominated a lease, I anticipated that high quality seismic procedures would be conducted in harmony with the extraordinary, unique oil and gas development potential in the Montana Overthrust Belt where extensive oil and gas seismic and drilling already is underway. I firmly believe that the Veritas Seismic Program clearly fulfills these expectations.

And just as important, the Veritas Seismic Program will help restore economic vitality to the area which is long overdue. Nationally, sensible development of oil and gas resources in this area with the aid of the Veritas Seismic Program will contribute significantly to the enhancement of future energy resources.

Sincerely,

Randall L. Weeks,
Montana Oil and Gas Leaseholder

cc: Montana Petroleum Association
Senator Denny Rehberg
My good friends along the Foothills of the Rocky Mountains

Eneboe, Erik

From: Kay Luthin [kayfineran@gmail.com]
Sent: Friday, September 23, 2011 5:34 PM
To: Eneboe, Erik
Subject: Deep Creek South 3-D Seismic

1 I wish to oppose all future energy development along the Rocky Mountain Front. The family
2 home is only a few miles from this proposed site, and I know the character of the land well.
3 It will not support development without devastation to the current ecosystems-- the plants,
the animals, and the people-- and the only purpose of this proposal is energy development.
So count me as a NO vote,

Kay Fineran Luthin
104 Wood St. W.
Clarion, PA 16214



David A. Galt
Executive Director

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Jon Wetmore
ExxonMobil Billings Refinery

Bruce Williams
Foresight Consulting, LLC

September 20, 2011

Erik Eneboe, Conrad Unit Manager
DNRC - Conrad Unit Office
P.O. Box 961
600 South Main, Suite 10
Conrad, MT 59425

Dear Mr. Eneboe:

The Montana Petroleum Association (MPA) is pleased to offer the following comments on the proposed seismic permit in the Deep Creek South area. MPA is a trade association that represents all facets of the petroleum industry in Montana. MPA has over 160 active members and a keen interest in oil and gas development in Montana.

As you know, oil and gas revenues provide a solid revenue stream to state and local governments. Much of this tax revenue is used to fund local K-12 education. In fact, the State Trust Lands included in the parcel under consideration would provide royalty, rent and bonus payments directly to education. Continued exploration and production of Montana's petroleum resources is just what this country needs in these tough economic times.

The CGG VERITAS Land Company has an excellent track record and will do a stellar job with minimal impact on land resource. Your agency is aware of the superior job they have just finished and this one will be no different.

Montana needs the economic stimulus from oil and gas development and we encourage your Department to authorize the permit request for the Deep Creek South Seismic Project.

Best Regards

David A. Galt
Executive Director
Montana Petroleum Assn.
P.O. Box 1186
25 Neill Ave. Suite 202
Helena, MT 59624
(406) 442-7582 Office
(406) 443-7291 Fax
(406) 461-1314 Mobil

July 6, 2011

Erik Eneboe, Conrad Unit Manager
DNRC, Trust Lands Management Division
600 South Main, Suite 10
P.O. Box 961
Conrad, MT 59425
eneboe@mt.gov

Mr. Eneboe,

These are my comments regarding the proposed Site-Specific Environmental Assessment for the for CGG Veritas Land Company to Conduct Seismic Operations along the Rocky Mountain Front.

This area is of national significance. The procedures and activates for seismic testing must comply with the existing laws, regulations and specific stipulations for protection of both people and the environment. Included in this supervisory duty is the responsibility of the State to assure the proper care of these special resources, especially State Trust Lands. No amount of money is worth destruction of or damage to the water, the wildlife and the overall values recognized by thousands and thousands of citizens of both this State and of our nation.

The DNRC and Board of Oil and Gas need to very carefully perform their duties to assure careful and complete compliance with the existing stipulations specifically designed to allow certain activities of this type while assuring the protection of the State's Trust lands, its wildlife and water.

DNRC needs to collaborative with the Department of Montana Fish, Wildlife and Parks, the US Fish and Wildlife Service and other public and private organizations to assure these special resources are adequately protected.

Please be very careful to assure that the wildlife resources, water and aesthetic values are not sacrificed in any manner to support a potentially risky commercial activity, be it seismic testing or actual drilling. History of oil and gas activities in this state is replete with environmental damage that often has to be addressed and cleaned up by our citizens after activities of this nature.

Please pay special attention to the duty to assure a clean and healthy environment as guaranteed by our Montana Constitution.

Thank you for the opportunity to comment,

Stoney Burk
P.O. Box 1019
Choteau, MT 59422
stoneman@3rivers.net

Eneboe, Erik

From: Jack King [jking@hancock-enterprises.com]
Sent: Thursday, September 15, 2011 10:24 AM
To: Eneboe, Erik
Subject: Deep Cr Sout 3-D Seismic

Eric Enebo:

Please be advised that I have reviewed the information that you have provided regarding the subject proposed seismic program. I have personally been involved in many seismic shooting programs through the planning, permitting, on site while shooting and interpretation.

Thank you for the opportunity to submit comments.

My experience is:

- All activity will be done subject to input from the surface owners.
- Activity and permits will be conducted subject to State laws that protect water sheds.
- Activity will be conducted subject to archeological and wildlife inventories.
- Activity will be conducted subject strict permitting and regulatory rules

If any of the foregoing is not mitigated then a permit will not be issued to conduct seismic activity on the those lands.

Beyond the foregoing, the anticipated response that we need to save this "special place", or we need to save "this place", is disingenuous at best. Having dealt with hundreds of landowners I have never met one owner that did not have deep pride in their place and felt their land was also very special and worth protecting. I agree with them. Deep Cr South is also special, but it is not "extra special" relative to other ownership. This area should be handled in the same manner as other lands that are also important to the owners and neighbors.

Operations can be conducted that leave a minimal footprint followed by full restoration efforts.

I would encourage the DNRC to follow their process, insisting on the mitigating issues they have in place and issue permits to shoot in a timely manner, as appropriate.

Although the above comments are relative to seismic activity the same discussion would be relevant for any drilling activity.

Thank You,

Jack King
Hancock Enterprises
P. O. Box 2527
Billings, MT 59103
406.252.0576 o
406.252.1760 fax



Montana Fish, Wildlife & Parks

TO: Eric Eneboe, Conrad Unit Manager
DNRC – Conrad Unit Office
PO Box 961
600 S. Main, Suite 10
Conrad, MT 59425

FROM: Brent Lonner, Area Wildlife Biologist
MT Fish, Wildlife & Parks

DATE: September 14, 2011

SUBJECT: *Deep Creek South 3-D Seismic*

This comment letter is in response to the proposed seismic operations by CGG Veritas Land Company located on the Rocky Mountain Front. Based on the description in the letter, it would appear that the initial activity would likely last at least one month, assuming under ideal conditions (perhaps longer if conditions do not warrant reliable data collection). Below, please find comments related to the proposed activities.

2 All proposed seismic operations lie within the Rocky Mountain Front Foothills Focus Area identified in the Comprehensive Fish and Wildlife Conservations Strategy (CFWCS, MFWP 2005). There are a total of 362 terrestrial vertebrate species that have been identified within the Rocky Mountain Front Foothills Focus Area, 19 of which are considered Tier I species of great conservation need (Table 1) (CFWCS, MFWP 2005). More specifically, the Deep Creek area (T24N, R7W, Sections 22, 23 & 27) is a corridor that does have regular grizzly bear activity/presence. Minimizing activity on at least the DNRC parcels in this area is important, especially during the height of grizzly bear presence in this area which is from approximately March through November. Grizzly bear hibernating periods normally last from sometime in November to March/April. Other seasonal activity by wildlife in this area, including bird nesting (April – August) and pronghorn antelope/mule and white-tailed deer fawning (May – July), are also important time frames to avoid in order to mitigate direct or indirect disturbances to young of the year wildlife.

1 There are 4 Tier 1 Habitat types identified in the Rocky Mountain Front Foothills Focus Area, comprising approximately 69% of the area (CFWCS, MFWP 2005). Negative physical disturbance to these habitat types (i.e., native short grass prairie or riparian zone habitat types) is more likely to occur during the primary growth period (April – September). In addition to any

1

potential negative disturbance to the habitat, physically conducting some of the proposed activities may prove to be difficult due to habitat conditions (i.e., saturated ground, significant snow accumulation/drifts, wind, etc.) depending on the time of year.

3

Lastly, hunting and other recreation on these public lands is likely highest in the fall (September-November). In order to minimize disturbance to hunter and other recreationists, it is recommended to not conduct these activities during this period.

2

Having stated the above, it would appear that the best time to minimize any disturbance to wildlife and wildlife habitat on these lands as well as to the people who recreate on them

3

would be during the winter period (December – February). Realizing that there will always be some wildlife/habitat disturbance (i.e., wintering wildlife on these lands during the winter period) no matter when the seismic operations are being conducted.

If there are any other questions or concerns please do not hesitate to contact me. Thanks for the opportunity to comment.

Brent Lonner
Wildlife Biologist
MT Fish, Wildlife & Parks,
PO Box 488
Fairfield, MT 59436
406-467-2488
blonner@mt.gov

Table 1. Tier 1 terrestrial species of greatest conservation need located on the Rocky Mountain Front Focus Area.

1 Western Toad	6 Harlequin Duck	11 Black Tern	16 Northern Bog Lemming
2 Northern Leopard Frog	7 Bald Eagle	12 Flammulated Owl	17 Grizzly Bear
3 Western Hog-nosed Snake	8 Piping Plover	13 Burrowing Owl	18 Canada Lynx
4 Common Loon	9 Mountain Plover	14 Townsend’s Big-eared Bat	19 American Bison
5 Trumpeter Swan	10 Long-Billed Curlew	15 Black-tailed Prairie Dog	

Literature Cited

Montana’s Comprehensive Fish and Wildlife Conservation Strategy, Executive Summary. 2005. Montana Fish, Wildlife & Parks, 1420 East Sixth Avenue, Helena, MT 59620.

Eneboe, Erik

From: Gene & Linda Sentz [friends@3rivers.net]
Sent: Thursday, September 01, 2011 8:33 PM
To: Eneboe, Erik
Cc: Jake102347@yahoo.com; 'Tony Porcarelli'; 'Tony Bynum'; 'Karl & Teri Rappold'; 'Dusty Crary'; sevenlazyp@montana.com; 'Ben'
Subject: Public comments on EA for seismic operations near the Rocky Mountain Front

September 1, 2011

Mr Erik Eneboe, manager
DNRC – Conrad Unit Office
PO Box 961
600 S Main, suite 10
Conrad, MT 59425
eneboe@mt.gov

Dear Erik,

We just received a 'notice of intent' that DNRC will prepare an Environmental Assessment for CGG Veritas Land Co to perform seismic operations approximately 15 miles SW of Choteau.

1-4 Our comments in general simply specify that we (and many other locals) hope that there is an absolute minimum of site disturbance to the quality of air, water, land, visual, cultural, agricultural and wildlife resources in the unit of proposed activity.

5 Also, we have been discussing the question of groundwater contamination from oil and gas "fracking." We realize that potential future deep drilling & fracking is much more invasive than the short-term seismic activity, but it seems that now is the time for the State of Montana to be quality-testing the waters of all streams (e.g. Teton River, Deep Creek, Sun River, etc) near where future fracking operations might occur. Such testing will provide a baseline measure of water quality for future reference, in case there may be contamination caused by oil & gas drilling and fracking in the future.

Has any such water testing taken place already?
If not, now is the time to begin.

Thanks, and best regards,

Gene Sentz
Friends of the Rocky Mountain Front
PO Box 763
Choteau, Montana 59422
friends@3rivers.net