

**DNRC - Trust Land Management Division**

DS-252

## CHECKLIST ENVIRONMENTAL ASSESSMENT

<b>Project Name:</b> Seismic Permit No. 1432 – Majerus 3-D	<b>Proposed Implementation Date:</b> June 25, 2004
<b>Proponent:</b> Polaris Explorer USA, Inc. , C/o John O Brown Jr., PO Box 240, Havre, MT 59501	
<b>Type and Purpose of Action:</b> Polaris Explorer USA, Inc. is proposing to conduct the Majerus 3-D seismic project for the exploration of natural gas formations across a tract of state land. Polaris Explorer USA, Inc. will be conducting the seismic project on behalf of JB Exploration, Inc... The seismic project will cover a majority of the 640 acres found on this tract of state land.	
<b>Location:</b> <u>Township 34.0 North, Range 17.0 East, M.P.M.</u> Section 16: All – 640 Acres	<b>County:</b> Hill County, Montana

**RECEIVED**

JUN 14 2004

### I. PROJECT DEVELOPMENT

<p>1. PUBLIC INVOLVEMENT, AGENCIES, GROUPS OR INDIVIDUALS CONTACTED: Provide a brief chronology of the scoping and ongoing involvement for this project.</p>	<p>The Department of Natural Resources and Conservation (DNRC) has been petitioned by Polaris Explorer USA, Inc. to conduct the Majerus 3-D seismic project across the above referenced tract of state land. The Montana DNRC sent out scoping letters to the state's surface lessee, East End Colony, to notify them of this project. The scoping letter identifies the location of the proposed seismic project across this tract of state land. The letter also informs East End Colony on how damages may be settled with Polaris Explorer USA, Inc. for damages sustained to the native rangeland and/or agricultural land over course of this project.</p>
<p>2. OTHER GOVERNMENTAL AGENCIES WITH JURISDICTION, LIST OF PERMITS NEEDED:</p>	<p>The Montana DNRC's; Havre Unit Office, Minerals Management Bureau, and the Montana Board of Oil &amp; Gas are the only governmental agencies with jurisdiction for this type of project on State School Trust lands. Polaris Explorer USA, Inc. will need to obtain a seismic permit from the Montana DNRC, prior to conducting any seismic activity on state land. The seismic company that has been contracted to do the seismic work under this permit (Polaris Explorer USA, Inc.) must have a valid permit with the county and have registered their bond with the Secretary of State's Office.</p>

**LEGISLATIVE ENVIRONMENTAL POLICY OFFICE**

3. ALTERNATIVES CONSIDERED:	<p><b>Action Alternative:</b> Grant Polaris Explorer USA, Inc. permission to conduct the Majerus 3-D seismic project to explore for natural gas formations across this tract of state land. The Montana DNRC will issue Polaris Explorer USA, Inc. a seismic permit to conduct this project on this tract of state land.</p> <p><b>No Action Alternative:</b> Deny Polaris Explorer USA, Inc. permission to conduct the Majerus 3-D seismic project across this tract of state land. The Montana DNRC will not issue Polaris Explorer USA, Inc. a seismic permit to conduct this project on this tract of state land.</p>
-----------------------------	---

## II. IMPACTS ON THE PHYSICAL ENVIRONMENT

RESOURCE	POTENTIAL IMPACTS
<p>4. GEOLOGY AND SOIL QUALITY, STABILITY AND MOISTURE: Are fragile, compactible or unstable soils present? Are there unusual geologic features? Are there special reclamation considerations?</p>	<p><b>Action Alternative:</b> The soils will receive a minimal disturbance with this type of activity. The proposed seismic project will only take place while the ground is dry. No unusual geological features are present on this tract of state land. Most of the soils are suitable for this type of activity, but some areas may experience compaction due to the heavy equipment that will be used. The seismic company is prohibited from all recording activities within 100 feet of the water reservoir and the intermittent drainage located throughout the W2E2. No vehicles will be allowed to traverse this area. All receiver lines shall be laid by hand crews in this area. There are no special reclamation considerations for this project, as long as the seismic company follows the stipulations that have been put in place by the Montana DNRC.</p> <p><b>No Action Alternative:</b> The soils that are located on this tract of state land will not be disturbed. The seismic company will not be issued a seismic permit to conduct the Majerus 3-D seismic project across this tract of state land.</p>

## II. IMPACTS ON THE PHYSICAL ENVIRONMENT

<p>5. WATER QUALITY, QUANTITY AND DISTRIBUTION: Are important surface or groundwater resources present? Is there potential for violation of ambient water quality standards, drinking water maximum contaminant levels, or degradation of water quality?</p>	<p><b>Action Alternative:</b> The location of the seismic project does contain important surface and/or groundwater resources during different times of the year. The seismic company is prohibited from any seismic activity within 300 feet of any springs, water wells, streams, lakes or water storage reservoir facilities to maintain the integrity of these water resources. The seismic company is prohibited from all recording activity within 100 feet of the water reservoir in the W2E2. Polaris Explorer USA is also prohibited from crossing the intermittent drainage found in the W2E2 as well. This type of activity does not have the potential to contaminate drinking water or degrade the present water quality found in this area. There will be no impacts on the water resources found in this area, as long as the seismic company follows the guidelines and stipulations that the Montana DNRC has set in place.</p> <p><b>No Action Alternative:</b> The water quality, quantity, and distribution will not be impacted. The seismic company will not be allowed to conduct the Majerus 3-D seismic project across this tract of state land. Water quality standards will not be violated and drinking water will not be degraded in this area.</p>
<p>6. AIR QUALITY: Will pollutants or particulate be produced? Is the project influenced by air quality regulations or zones (Class I airshed)?</p>	<p><b>Action Alternative:</b> The project is expected to have a minimal impact on the air quality in the surrounding area. An increase in traffic across the designated roads may produce some additional dust particulates throughout the course of the project. However, after the seismic company completes the project, traffic will return to normal in this area. The seismic company will be required to use all the existing roads and trails to minimize the impacts to the native rangeland and agricultural land.</p> <p><b>No Action Alternative:</b> The air quality currently found on this tract of state land will not be altered. No pollutants or particulates will be produced in this area. The Montana DNRC will not issue Polaris Explorer USA, Inc. a seismic permit to conduct the Majerus 3-D seismic project across this tract of state land.</p>

## II. IMPACTS ON THE PHYSICAL ENVIRONMENT

7. VEGETATION COVER, QUANTITY AND QUALITY: Will vegetative communities be permanently altered? Are any rare plants or cover types present?

The vegetative communities found on the native rangeland include the following plants: western wheatgrass (*Agropyron smithii*), needle-and-thread (*Stipa comata*), blue grama (*Bouteloua gracilis*), prairie junegrass (*Koeleria pyramidata*), green needlegrass (*Stipa viridula*), sedges (*Carex spp.*), sandberg bluegrass (*Poa secunda*), cudweed sagewort (*Artemisia ludoviciana*), fringed sagewort (*Artemisia frigida*), dense clubmoss (*Selaginella densa*), silver sagebrush (*Artemisia cana*), and woods rose (*Rosa woodsii*).

The agricultural land is strip farmed using no-till farming practices. The strips alternate from no-till summerfallow strips to seeded winter wheat strips.

**Action Alternative:** The proposed project is expected to have a minimal impact on the vegetative cover, quantity, and quality found on the native grazing land. The agricultural land will receive moderate to high impacts with this type of project, since it will be destroying portions of the crop from the tracks of the vehicles used for this project. The permittee will settle all surface damages with the state's surface lessee within a reasonable time period following the completion of the Majerus 3-D seismic project. The vegetative communities found on the native rangeland and agricultural land will be matted down from the heavy equipment passing over it. There are no rare plants or cover types located within this tract of state land. There will be no vehicular activity, other than specified on the plat map. The seismic company will avoid the water reservoir and the intermittent drainage located in the native grazing land by going around it by at least 100 feet. All receiver lines shall be laid by hand crews in and along the intermittent drainage found on this tract. The native rangeland disturbance will be small in scope and plant production should recover within the year. The seismic activity will only be allowed to take place during dry surface conditions.

**No Action Alternative:** The vegetative communities found throughout the proposed project area will not be altered. Rare plant and cover types will not be disturbed. The winter wheat crop will not be destroyed by the heavy equipment used during this project. Polaris Explorer USA, Inc. will not be issued a seismic permit to conduct the Majerus 3-D seismic project across this tract of state land.

II. IMPACTS ON THE PHYSICAL ENVIRONMENT

8. TERRESTRIAL, AVIAN AND AQUATIC LIFE AND HABITATS:  
Is there substantial use of the area by important  
wildlife, birds or fish?

**Action Alternative:** The area of the proposed activity is used by many different types of wildlife and bird species. Wildlife and bird species may be temporarily displaced in this area throughout the course of the seismic project. However, wildlife and bird species found in this area will not be permanently relocated as a result of this project. Once the project is completed, wildlife and bird species will return to normal activities in this area. Wildlife habitat will not be significantly impacted by the seismic project, as long as the seismic company follows the stipulations that the Montana DNRC has set in place.

**No Action Alternative:** The terrestrial and avian life and their habitats will not be permanently altered. Wildlife and bird species will not be temporarily displaced by this project. The Montana DNRC will not issue Polaris Explorer USA, Inc. a seismic permit to conduct the Majerus 3-D seismic project across this tract of state land.

9. UNIQUE, ENDANGERED, FRAGILE OR LIMITED ENVIRONMENTAL RESOURCES: Are any federally listed threatened or endangered species or identified habitat present? Any wetlands? Sensitive Species or Species of special concern?

**Action Alternative:** The timing of this project will take place while the ground is dry. This will minimize the overall disturbance to existing habitat types and ecosystem. Federally listed, threatened, and endangered species will be able to migrate through this area with minimal disturbance. There are sensitive species and species of special concern known to use this area as habitat. These species may be temporarily displaced with this type of activity. However, these species will not be permanently relocated with this type of activity. The seismic company will complete their work in one to two days and they will leave the area completely. All wildlife species found across this area will return to normal everyday activities once the seismic company finishes the project and leaves this area. There are no wetlands located in the immediate area of the proposed disturbance. The permittee will avoid crossing the water reservoir and the intermittent drainage found in the W2E2 to ensure wildlife habitat is not altered.

**No Action Alternative:** The unique, endangered, fragile and/or limited environmental resources found within the immediate area of the proposed disturbance will not be altered. Polaris Explorer USA, Inc. will not be issued a seismic permit to conduct the Majerus 3-D seismic project across this tract of state land.

## II. IMPACTS ON THE PHYSICAL ENVIRONMENT

10. HISTORICAL AND ARCHAEOLOGICAL SITES: Are any historical, archaeological or paleontological resources present?

**Action Alternative:** The Montana DNRC has surveyed the proposed project area for cultural resources. Two tepee rings were recorded in the E2NE4SW4SE4. This area will be avoided by the recording crew for this project. Patrick Rennie, Montana DNRC Archaeologist, was contacted for his input on cultural resources in this area. He has seen no evidence that 3-D seismic activity, on frozen or dry ground, has any ability to impact cultural resources in this area.

**No Action Alternative:** Historical and archaeological resources present on these tracts of state land will remain intact. Unknown or buried historical and archaeological resources will not be disturbed. The Montana DNRC will not issue Polaris Explorer USA, Inc. a seismic permit to conduct the Majerus 3-D seismic project across this tract of state land.

11. AESTHETICS: Is the project on a prominent topographic feature? Will it be visible from populated or scenic areas? Will there be excessive noise or light?

**Action Alternative:** The proposed project is located in a rural area approximately 11 miles northeast of Havre, Montana. Some areas contained within this project will be visible to the public. The proposed disturbance will create some excessive noise, throughout the entirety of the project. However, noise levels will return to normal once the project is completed and the seismic company pulls out of the area. The seismic company is prohibited from traversing the intermittent drainage located in the W2E2 of this tract. Restricting this activity will ensure that the aesthetic character of the land is not diminished, that wildlife habitat will not be altered, and that erosion levels will not increase in this area.

**No Action Alternative:** There will be no alterations to the aesthetic character of the land. The Montana DNRC will not issue Polaris Explorer USA, Inc. a seismic permit to conduct the Majerus 3-D seismic project across this tract of state land.

## II. IMPACTS ON THE PHYSICAL ENVIRONMENT

<p>12. DEMANDS ON ENVIRONMENTAL RESOURCES OF LAND, WATER, AIR OR ENERGY: Will the project use resources that are limited in the area? Are there other activities nearby that will affect the project?</p>	<p><b>Action Alternative:</b> The native grazing land will receive minimal, short-term impacts with this type of activity. The agricultural land will have more substantial impacts since the recording crews will be driving through it and destroying small portions of the winter wheat strips. The permittee will settle all surface damages with the state's surface lessee within a reasonable time period following the completion of the Majerus 3-D seismic project. The project will take place while the ground is dry, in order to limit the impact to these vegetative resources. The project will not use resources that are limited in the area.</p> <p><b>No Action Alternative:</b> There will be no demands on the environmental resources of land, water, air or energy. The Montana DNRC will not issue Polaris Explorer USA, Inc. a seismic permit to conduct the Majerus 3-D seismic project across this tract of state land.</p>
<p>13. OTHER ENVIRONMENTAL DOCUMENTS PERTINENT TO THE AREA: Are there other studies, plans or projects on this tract?</p>	<p><b>Action Alternative:</b> The Montana DNRC will continue to monitor mineral and surface management activities on state land to assess the impacts from this type of activity on the surrounding ecosystem. The Montana DNRC will continue to administer the licensed agricultural and grazing activities that are currently taking place on this tract of state land.</p> <p><b>No Action Alternative:</b> No further studies, plans, or projects will be needed for this project. The Montana DNRC will not issue Polaris Explorer USA, Inc. a seismic permit to conduct the Majerus 3-D seismic project across this tract of state land. The Montana DNRC Trust Land Management Division will continue do field reviews on this tract of state land every ten years in accordance with Montana State Statute to increase revenue to the Trust beneficiaries of Montana.</p>

III. IMPACTS ON THE HUMAN POPULATION	
RESOURCE	POTENTIAL IMPACTS AND MITIGATION MEASURES
<p>14. HUMAN HEALTH AND SAFETY: Will this project add to health and safety risks in the area?</p>	<p><b>Action Alternative:</b> The seismic company, their subcontractors, and/or their employees understand the risks involved with this type of project. They assume the risks involved in seismic project as an occupational hazard. The project will have no long-term impacts on the human health and safety risks that are found within this area.</p> <p><b>No Action Alternative:</b> The human health and safety risks found in this area will continue to remain minimal. The Montana DNRC will not issue Polaris Explorer USA, Inc. a seismic permit for this project. There will be no human health or safety risks to the seismic company, subcontractors, and/or its employees.</p>
<p>15. INDUSTRIAL, COMMERCIAL AND AGRICULTURAL ACTIVITIES AND PRODUCTION: Will the project add to or alter these activities?</p>	<p><b>Action Alternative:</b> The Montana DNRC has set up stipulations for the seismic company to ensure that the industrial, commercial, and agricultural activities will not be altered with this type of project. The native rangeland will receive minimal impacts with this type of activity. The grass will be matted down and forage will be lost for grazing livestock on this tract of state land. The seismic project will matt the grass down, but will not impact the long-term, future forage productivity found on the native grazing land. The agricultural land will receive the most impacts, since the equipment used for this project will destroy small strips of the winter wheat crop. The permittee will settle all surface damages with the state's surface lessee within a reasonable time period following the completion of the Majerus 3-D seismic project. The seismic company is prohibited from traversing the intermittent drainage found in the W2E2.</p> <p><b>No Action Alternative:</b> The industrial, commercial, and agricultural activities found on this tract of state land will not be altered. The winter wheat crop yield will not be reduced from its potential due to the seismic company destroying it. Polaris Explorer USA, Inc. will not be issued a seismic permit for this project. Native rangeland forage production will not be altered this year.</p>

<p>16. QUANTITY AND DISTRIBUTION OF EMPLOYMENT: Will the project create, move or eliminate jobs? If so, estimated number.</p>	<p><b>Action Alternative:</b> The project will not alter the quantity and distribution of employment in this area. The project will create short-term jobs for the seismic company's employees, but will have no impact on the local quantity and distribution of employment.</p> <p><b>No Action Alternative:</b> The quantity and distribution of employment will not be impacted in the surrounding area. Polaris Explorer USA, Inc. will not be issued a seismic permit to conduct the Majerus 3-D seismic project across this tract of state land.</p>
<p>17. LOCAL AND STATE TAX BASE AND TAX REVENUES: Will the project create or eliminate tax revenue?</p>	<p><b>Action Alternative:</b> The project will not create or eliminate tax revenue within Hill County. The local and state tax base will remain the same.</p> <p><b>No Action Alternative:</b> The local and state tax base will not be impacted. Tax revenue in Hill County will remain the same.</p>
<p>18. DEMAND FOR GOVERNMENT SERVICES: Will substantial traffic be added to existing roads? Will other services (fire protection, police, schools, etc) be needed?</p>	<p><b>Action Alternative:</b> The project will increase traffic on the existing roads throughout the course of the project. Traffic will return to normal, once the seismic company has completed the project and left the area. The project will not require other services such as police, fire departments, or schools. No additional government services will be needed for this project.</p> <p><b>No Action Alternative:</b> There will be no additional demand for government services. The Montana DNRC will not issue Polaris Explorer USA, Inc. a seismic permit to conduct the Majerus 3-D seismic project across this tract of state land.</p>

<p>19. LOCALLY ADOPTED ENVIRONMENTAL PLANS AND GOALS: Are there State, County, City, USFS, BLM, Tribal, etc. zoning or management plans in effect?</p>	<p><b>Action Alternative:</b> The goal of the Montana DNRC/TLMD is to manage the State of Montana's trust land resources to produce revenue for the trust beneficiaries, while considering environmental factors and protecting the future income-generating capacity of the land. Exploring for natural gas and oil formations on state land has the potential to increase the income-generating capacity of the land. If natural gas or oil formations are found on the state land, additional revenue may get be generated for the trust beneficiaries, through royalties from the sale of natural gas and/or oil from a commercially producing well that would have to be drilled. Natural gas and/or oil development proposals will be reviewed through the same MEPA process as seismic projects.</p> <p><b>No Action Alternative:</b> There will be no impacts to the locally adopted environmental plans or goals that the Montana DNRC/TLMD has for this tract of state land. Polaris Explorer USA, Inc. will not be issued a seismic permit to conduct the Majerus 3-D seismic project across this tract of state land.</p>
<p>20. ACCESS TO AND QUALITY OF RECREATIONAL AND WILDERNESS ACTIVITIES: Are wilderness or recreational areas nearby or accessed through this tract? Is there recreational potential within the tract?</p>	<p><b>Action Alternative:</b> The location of the proposed seismic project does have recreational potential. This tract of state land does have legal access for recreational activities. Upland game bird hunting, waterfowl hunting, big game hunting, bird watching, and hiking are just some of the types of recreational activities that take place in this area. The proposed project will not alter these activities. Recreational activities are limited this time of year, but this project will not alter the environment for future recreational opportunities.</p> <p><b>No Action Alternative:</b> The access to and quality of the wilderness and recreational activities found in this area will continue to remain the same. This tract of state land will continue to be used for recreational purposes by people who possess a Montana Conservation License with the newly attached State Lands Recreational Use Permit.</p>

<p>21. DENSITY AND DISTRIBUTION OF POPULATION AND HOUSING: Will the project add to the population and require additional housing?</p>	<p><b>Action Alternative:</b> The density and distribution of population and housing will not be impacted with the approval of the seismic project. The proposed activity will increase traffic on the designated roads into the area of the project. The increase in traffic will occur for the duration of the entire seismic project. The location of this project is in a rural area with minimal localized housing. This area is primarily used for livestock grazing purposes and the production of dryland agricultural commodities.</p> <p><b>No Action Alternative:</b> The density and distribution of population and housing will not change in this area. The proposed project will not have any impact on the density and distribution of population and housing in this area, regardless of the decision from the Montana DNRC. Polaris Explorer USA, Inc. will not be issued a seismic permit to conduct the Majerus 3-D seismic project across this tract of state land.</p>
<p>22. SOCIAL STRUCTURES AND MORES: Is some disruption of native or traditional lifestyles or communities possible?</p>	<p><b>Action Alternative:</b> This project will have a minimal impact on the traditional lifestyles found in this area. The social structures and mores will not be impacted by the proposed seismic activity, especially since this project is located in a rural area.</p> <p><b>No Action Alternative:</b> The social structures and mores will continue to stay the same. The native and traditional lifestyles found in this area will not be altered. Polaris Explorer USA, Inc. will not be issued a seismic permit to conduct the Majerus 3-D seismic project across this tract of state land.</p>
<p>23. CULTURAL UNIQUENESS AND DIVERSITY: Will the action cause a shift in some unique quality of the area?</p>	<p><b>Action Alternative:</b> The proposed activity will not cause a shift in any of the unique qualities that are found within the surrounding area. The seismic project will not change the cultural uniqueness and/or the diversity currently found on this tract of state land.</p> <p><b>No Action Alternative:</b> The cultural uniqueness and diversity of the land will not be disturbed. Polaris Explorer USA, Inc. will not be issued a seismic permit to conduct the Majerus 3-D seismic project across this tract of state land.</p>



IV. FINDING	
25. ALTERNATIVE SELECTED:	Action
26. SIGNIFICANCE OF POTENTIAL IMPACTS:	NSI
27. Need for Further Environmental Analysis: <input type="checkbox"/> EIS <input type="checkbox"/> More Detailed EA <input checked="" type="checkbox"/> No Further Analysis	

EA Checklist Approved By: Clive Rooney  
Name

Area Manager, Northeastern Land Office  
Title

  
Signature

5-26-4  
Date