

DEPARTMENT OF NATURAL  
RESOURCES AND CONSERVATION  
NORTHEASTERN LAND OFFICE

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D.N.R.C.



STATE OF MONTANA

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January 26, 2004

MEMORANDUM

TO: Clive Rooney, Area Manager, Northeastern Land Office  
Wanda Walks, Mineral Leasing Section, Helena Office

FR: Dan Dobler, Havre Unit Manager, NELO *Dan Dobler*

RE: Seismic Permit No. 1423  
Polaris Exploration LTD / Devon Louisiana Corporation  
Blaine County, Montana

Township 27.0 North, Range 19.0 East

Section 12: S $\frac{1}{2}$ N $\frac{1}{2}$ , S $\frac{1}{2}$

Section 13: N $\frac{1}{2}$ , N $\frac{1}{2}$ S $\frac{1}{2}$ , SE $\frac{1}{4}$ SE $\frac{1}{4}$

Section 14: N $\frac{1}{2}$ , N $\frac{1}{2}$ S $\frac{1}{2}$

Section 15: N $\frac{1}{2}$ NW $\frac{1}{4}$ , SW $\frac{1}{4}$ NW $\frac{1}{4}$ , NE $\frac{1}{4}$ , N $\frac{1}{2}$ S $\frac{1}{2}$

Section 16: All

Section 24: S $\frac{1}{2}$ N $\frac{1}{2}$ , S $\frac{1}{2}$

Section 25: All

Section 36: All

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LEGISLATIVE ENVIRONMENTAL  
POLICY OFFICE

Polaris Exploration LTD is proposing to conduct a 2-D seismic project on the above referenced tracts of State land. Polaris Exploration has been hired on behalf of Devon Louisiana Corporation to do the seismic work. This type of project will create low impact energy sources by using vibroseis equipment. This equipment is used to locate shallow natural gas producing formations.

The proposed project will involve approximately 8 $\frac{1}{4}$  miles of State land. The surface impacts will consist mainly from limited vehicular travel across the surface and soil compaction from the tires and vibrating platform of the vibroseis equipment. The proponent will be required to contact the State's surface lessee, Cowan & Son Corporation, c/o William Cowan to inform him of the proposed seismic project. The proponent will be required to settle all surface damages within a reasonable time period following the completion of the proposed seismic project. This project is expected to have minor environmental impacts to the grazing land associated with the above referenced tracts of State land. If the proponent conducts this project during frozen or dry surface conditions and complies with the Departments terms and conditions for seismic activity on State land, there will be minimal negative impacts to the natural resources that exist on these tracts of State land.

I have prepared and enclosed the original Environmental Assessment Checklist for your review. Please review the EA Checklist, sign and date it, and return an executed copy to the Havre Unit Office. Please forward a copy of the EA Checklist to Connie Daruk, so that she can submit it to the EQC. I am recommending that the Department issue Polaris Exploration LTD a seismic permit to conduct 2-D seismic activities across the above referenced tracts of State land.

# **Seismic Permit No. 1423**

## **Polaris Exploration LTD**

*(Legal Descriptions)*

### **Township 27.0 North, Range 19.0 East**

**Section 12: S<sup>1</sup>/<sub>2</sub>N<sup>1</sup>/<sub>2</sub>, S<sup>1</sup>/<sub>2</sub>**

**Section 13: N<sup>1</sup>/<sub>2</sub>, N<sup>1</sup>/<sub>2</sub>S<sup>1</sup>/<sub>2</sub>, SE<sup>1</sup>/<sub>4</sub>SE<sup>1</sup>/<sub>4</sub>**

**Section 14: N<sup>1</sup>/<sub>2</sub>, N<sup>1</sup>/<sub>2</sub>S<sup>1</sup>/<sub>2</sub>**

**Section 15: N<sup>1</sup>/<sub>2</sub>NW<sup>1</sup>/<sub>4</sub>, SW<sup>1</sup>/<sub>4</sub>NW<sup>1</sup>/<sub>4</sub>, NE<sup>1</sup>/<sub>4</sub>, N<sup>1</sup>/<sub>2</sub>S<sup>1</sup>/<sub>2</sub>**

**Section 16: All**

**Section 24: S<sup>1</sup>/<sub>2</sub>N<sup>1</sup>/<sub>2</sub>, S<sup>1</sup>/<sub>2</sub>**

**Section 25: All**

**Section 36: All**

**Blaine County, Montana**

# CHECKLIST ENVIRONMENTAL ASSESSMENT

<b>Project Name: Seismic Permit No. 1423</b>	<b>Proposed Implementation Date: February 15, 2004</b>
<b>Proponent: Polaris Exploration Ltd, c/o Scott Lindenmuth, PO Box 383, Havre, MT 59501                  Devon Louisiana Corporation, 20 N. Broadway Suite 1500, Oklahoma City, OK 73102</b>	
<b>Type and Purpose of Action: Polaris Exploration Ltd. is proposing to conduct a 2-D seismic project for the exploration of natural gas formations on behalf of Devon Louisiana Corporation. The project is expected to cross approximately 8¼ miles of State land.</b>	
<b>Location: (See attached page for legal descriptions)</b>	<b>County: Blaine County, Montana</b>

## 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 Exploration Ltd. to conduct 2-D seismic activities across State land on behalf of Devon Louisiana Corporation. The Montana DNRC sent out a scoping letter to the State's surface lessee, Cowan &amp; Son Corporation, c/o William Cowan to notify him of the proposed project. The scoping letter identifies the location of the proposed seismic project and what he may be compensated for if there are impacts that deprive him of his leasehold use.</p>
<p>2. OTHER GOVERNMENTAL AGENCIES WITH JURISDICTION, LIST OF PERMITS NEEDED:</p>	<p>The Montana DNRC's, Havre Unit Office, Minerals and Management Bureau, and the Montana Board of Oil &amp; Gas are the only governmental agencies with jurisdiction for this type of project on lands in which the State of Montana owns the surface, mineral rights, or both. Polaris Exploration Ltd. will need to obtain a seismic permit from the Montana DNRC, prior to conducting any seismic activity on State lands. The seismic company that has been contracted to do the seismic work (Polaris Exploration Ltd) under this permit must have a valid permit with the county and have registered their bond with the Secretary of State's Office.</p>
<p>3. ALTERNATIVES CONSIDERED:</p>	<p><b>Action Alternative:</b> Grant Polaris Exploration Ltd. permission to conduct 2-D seismic activities for the exploration of natural gas formations across State lands.</p> <p><b>No Action Alternative:</b> Deny Polaris Exploration Ltd. a seismic permit in order to conduct 2-D seismic activities for the exploration of natural gas formations across 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 frozen or dry. No unusual geological features are present on these tracts of State land. The soils are suitable for this type of activity, but may experience some compaction due to the heavy equipment that is used. A map using aerial photography has been created for the seismic company that points out areas that are not authorized for seismic activity. These areas include steep slopes and coulee bottoms containing woody vegetation.</p> <p><b>No Action Alternative:</b> The soils that are located on these tracts of State land will not be disturbed. The seismic company will not be issued a seismic permit to conduct 2-D seismic activities across these tracts of State land.</p>
<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 crossing any of the highlighted coulees and steep slopes on the map. This will ensure that minimal erosion will occur in these areas. This type of activity does not have the potential to contaminate drinking water or degrade the present water quality found in this area.</p> <p><b>No Action Alternative:</b> The quality, quantity, and distribution of water resources in this area will not be impacted. The seismic company will not be allowed to conduct 2-D seismic activities across these tracts of State land. Water quality standards and drinking water will not be degraded in this area.</p>

II. IMPACTS ON THE PHYSICAL ENVIRONMENT

6. AIR QUALITY: Will pollutants or particulate be produced? Is the project influenced by air quality regulations or zones (Class I airshed)?

**Action Alternative:** The project is expected to have a minimal impact on the air quality in the surrounding area of the proposed activity. There will be an increase in traffic across the designated roads in this area by the seismic company. This activity may produce some dust particulates. However, after the seismic company completes the project, traffic will return to normal on the designated county roads. The seismic company will be required to use existing roads and trails for moving equipment from place to place.

**No Action Alternative:** The present air quality will not be impacted on these tracts of State land. No dust particulates will be produced in this area. The seismic company will not be issued a seismic permit to conduct 2-D seismic activities across these tracts of State land.

## 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?

This project will take place primarily on native rangeland with some areas containing tame pastures. 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*), prairie sandreed (*Calomovilfa longifolia*), cudweed sagewort (*Artemisia ludoviciana*), fringed sagewort (*Artemisia frigida*), dense clubmoss (*Selaginella densa*), silver sagebrush (*Artemisia cana*), buffaloberry (*Sheperdia argenticia*), greasewood (*Sarcobatus vermiculatus*), creeping juniper (*Juniperus horizontalis*), Rocky Mountain Juniper (*Juniperus scopulorum*), woods rose (*Rosa woodsii*), and Ponderosa pine (*Pinus ponderosa*).

The vegetative communities found within the tame pastures include the following plants: crested wheatgrass (*Agropyron cristatum*), smooth brome (*Bromus inermis*), slender wheatgrass (*Agropyron trachycaulum*), thickspike wheatgrass (*Agropyron dasystachyum*), alfalfa (*Medicago sativa*), and yellow sweetclover (*Melilotus officinale*).

**Action Alternative:** The proposed seismic project is expected to have a minimal impact on the vegetative cover, quantity, and quality of these tracts of State land. The vegetative communities in the immediate area of disturbance will be matted down by the tires and vibrating platform of the seismic trucks. Grass plants and forbs will not receive long-term impacts with this type of project. There are no rare plants or cover types present in this area. The seismic company will not be allowed to traverse up, down, or across the steep slopes that are found within the proposed project area. The seismic company will be prohibited from crossing all coulee areas that contain abundant woody vegetation. The disturbance will be small in scope, since the seismic activity will only be allowed to take place during frozen or 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 impacted. The seismic company will not be issued a seismic permit to conduct a 2-D seismic project across these tracts 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 project is used by many different types of wildlife and bird species. These species may be temporarily displaced in this area during the seismic project. Wildlife and bird species found in this area will not be permanently relocated, as a result of this activity. 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 proposed seismic project.

**No Action Alternative:** The terrestrial and avian life and their associated habitats found within this area will not be impacted. The seismic company will not be issued a seismic permit to conduct a 2-D seismic project across these tracts 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 frozen or dry. This should 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 these areas as habitat at different times of the year. These species may be temporarily displaced with this type of activity on these tracts of State land. 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 within 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.

**No Action Alternative:** The unique, endangered, fragile or limited environmental resources found in the immediate area of the proposed project will not be impacted. The seismic company will not be issued a seismic permit to conduct a 2-D seismic project on these tracts of State land. Federally listed, threatened, or endangered species will not be impacted. Sensitive species and species of special concern will not be temporarily displaced.

## II. IMPACTS ON THE PHYSICAL ENVIRONMENT

<p>10. HISTORICAL AND ARCHAEOLOGICAL SITES: Are any historical, archaeological or paleontological resources present?</p>	<p><b>Action Alternative:</b> The Montana DNRC has surveyed the proposed project area for existing cultural resources. Cultural resources are known to exist throughout the proposed project area. The Montana DNRC Archaeologist, Patrick Rennie, was contacted for his input on cultural resources in this area. He has seen no evidence that 2-D seismic activities have any ability to impact cultural resources during dry or frozen surface conditions.</p> <p><b>No Action Alternative:</b> Historical and archaeological resources present on these tracts of State land will remain intact. Unknown historical and archaeological resources present on these tracts of State land will not be disturbed. The seismic company will not be issued a seismic permit to conduct this seismic project. There will be no alterations to the historical or archaeological resources that exist on these tracts of State land.</p>
<p>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?</p>	<p><b>Action Alternative:</b> The proposed project is located in a very rural area. Some areas contained within this project will be visible to the public until new vegetative growth occurs this spring. The project will create some excessive noise during the initial stages of the project. However, the noise levels will return to normal once the project is completed and the seismic company pulls out of the area. The aesthetic character found on these tracts of State land will not be disturbed.</p> <p><b>No Action Alternative:</b> The project will not impact the aesthetic character of the land. The seismic company will not be issued a seismic permit to conduct 2-D seismic activities across these tracts of State land.</p>
<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 grazing land will receive some minimal, short-term impacts with this type of proposed activity. The project will take place while the ground is frozen or dry, in order to limit the impact to the native rangeland resources and tame pastures. 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 Exploration Ltd a seismic permit to conduct seismic activities on these tracts of State land.</p>

## II. IMPACTS ON THE PHYSICAL ENVIRONMENT

13. OTHER ENVIRONMENTAL DOCUMENTS PERTINENT TO THE AREA: Are there other studies, plans or projects on this tract?

**Action Alternative:** The DNRC will continue to monitor mineral and surface management activities on State land to assess the impacts of these projects on the surrounding ecosystem. The Montana DNRC will continue to administer the licensed activities that are currently taking place on State land. There are no other known studies, plans, or projects taking place on these tracts of State land.

**No Action Alternative:** No further studies, plans, or projects will be needed. The Montana DNRC will not issue the seismic company a seismic permit to conduct 2-D seismic activities across these tracts of State land. The Montana DNRC Trust Land Management Division will continue to perform field appraisals on tracts of State owned land every ten years, in accordance with Montana State Statute.

## III. IMPACTS ON THE HUMAN POPULATION

## RESOURCE

## POTENTIAL IMPACTS AND MITIGATION MEASURES

14. HUMAN HEALTH AND SAFETY: Will this project add to health and safety risks in the area?

**Action Alternative:** The seismic company, subcontractors, and/or their employees understand the risks involved in this type of project. They assume the risks involved in seismic project as an occupational hazard. The project will not add to the human health and safety risks found in this area.

**No Action Alternative:** The human health and safety risks found in this area will continue to remain minimal. The Montana DNRC will not issue Polaris Exploration Ltd a seismic permit to conduct 2-D seismic activities across these tracts of State land. There will be no human health or safety risks to the seismic company, subcontractors, and/or its employees.

<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 grazing land will receive some impacts with this type of activity. The proposed project will matt the grass down, but will not impact the long-term, future forage productivity on these tracts of State grazing land. Damages will be settled with the State's surface lessee within a reasonable time period following the completion of the proposed seismic project.</p> <p><b>No Action Alternative:</b> The industrial, commercial, and agricultural activities will not be altered. Forage production on the tame pastures will not be depleted. The seismic company will not be issued a seismic permit. The native rangeland will continue to provide forage that will be dictated by moisture received throughout the spring and summer.</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. The seismic company's employees travel all around the United States doing seismic projects and they will simply move on to the next job.</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> This project will not create or eliminate tax revenue in Blaine County. The local and state tax bases will remain the same.</p> <p><b>No Action Alternative:</b> The local and state tax bases will not be impacted. Tax revenue in Blaine County will continue to 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 designated roads during the initial stages of the project. Traffic will return to normal, once the seismic company has completed the project. The project will not require other services such as police, fire departments, or schools. No additional government services will be needed on these tracts of State land.</p> <p><b>No Action Alternative:</b> There will be no additional demands for government services. The Montana DNRC will not issue the Polaris Exploration Ltd a seismic permit to conduct 2-D seismic activities across these tracts 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 successful producing well. Natural gas and/or oil development proposals will be reviewed through the same MEPA process, but as entirely different 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 these tracts of State land. The Montana DNRC will not issue Polaris Exploration Ltd a seismic permit to conduct 2-D seismic activities across these tracts 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> These tracts of State land do have moderate to high recreational potential. Some of these tracts of State land do have legal access for recreational activities. Upland game bird 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 seismic project will not alter these activities.</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. These tracts of State land that have legal access, will continue to be used for recreational purposes by people who possess a State Lands Recreational Use License.</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 proposed project. The proposed activity will increase traffic on the designated roads into the areas of the project. The increase in traffic will only occur during the seismic project. The location of the proposed project is in a very rural area. This area is primarily used for livestock grazing purposes.</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.</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 area is located in a very 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 disrupted. The Montana DNRC will not issue the Polaris Exploration Ltd a seismic permit to conduct 2-D seismic activities across these tracts of State land.</p>



IV. FINDING	
25. ALTERNATIVE SELECTED:	Action
26. SIGNIFICANCE OF POTENTIAL IMPACTS:	N. S. I
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

  
Signature

Area Manager, Northeastern Land Office  
Title

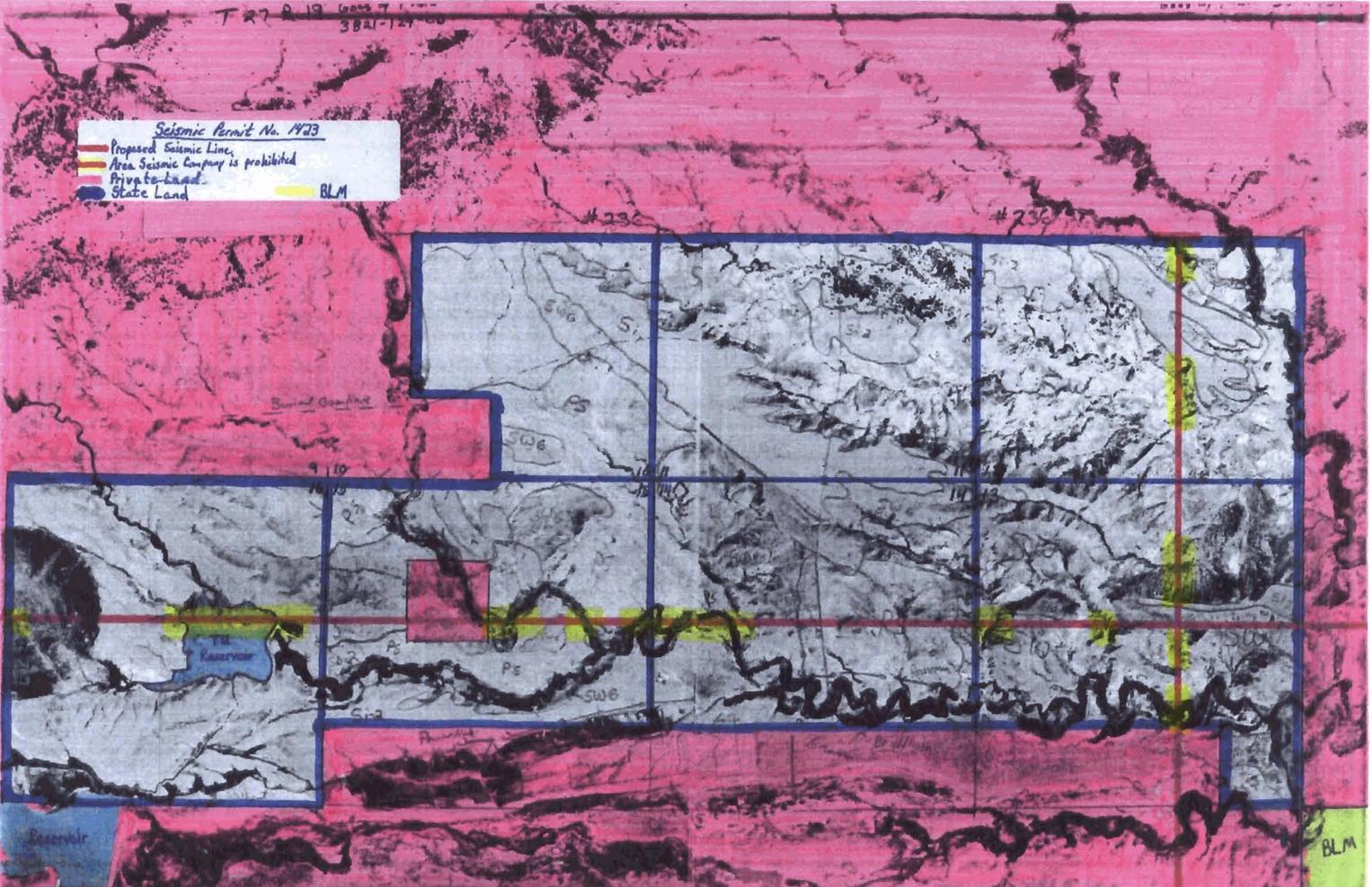
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Date

T 27 R 19 Sec 7  
3821-124-60

Seismic Permit No. 1423

- Proposed Seismic Line
- Area Seismic Company is prohibited
- Private Land
- State Land

BLM



BLM

