



# United States Department of the Interior

BUREAU OF LAND MANAGEMENT  
Rock Springs Field Office  
280 Highway 191 North  
Rock Springs, Wyoming 82901



## **SCOPING NOTICE RUBICON 3D SEISMIC SURVEY**

### **Devon Energy Production Company LP**

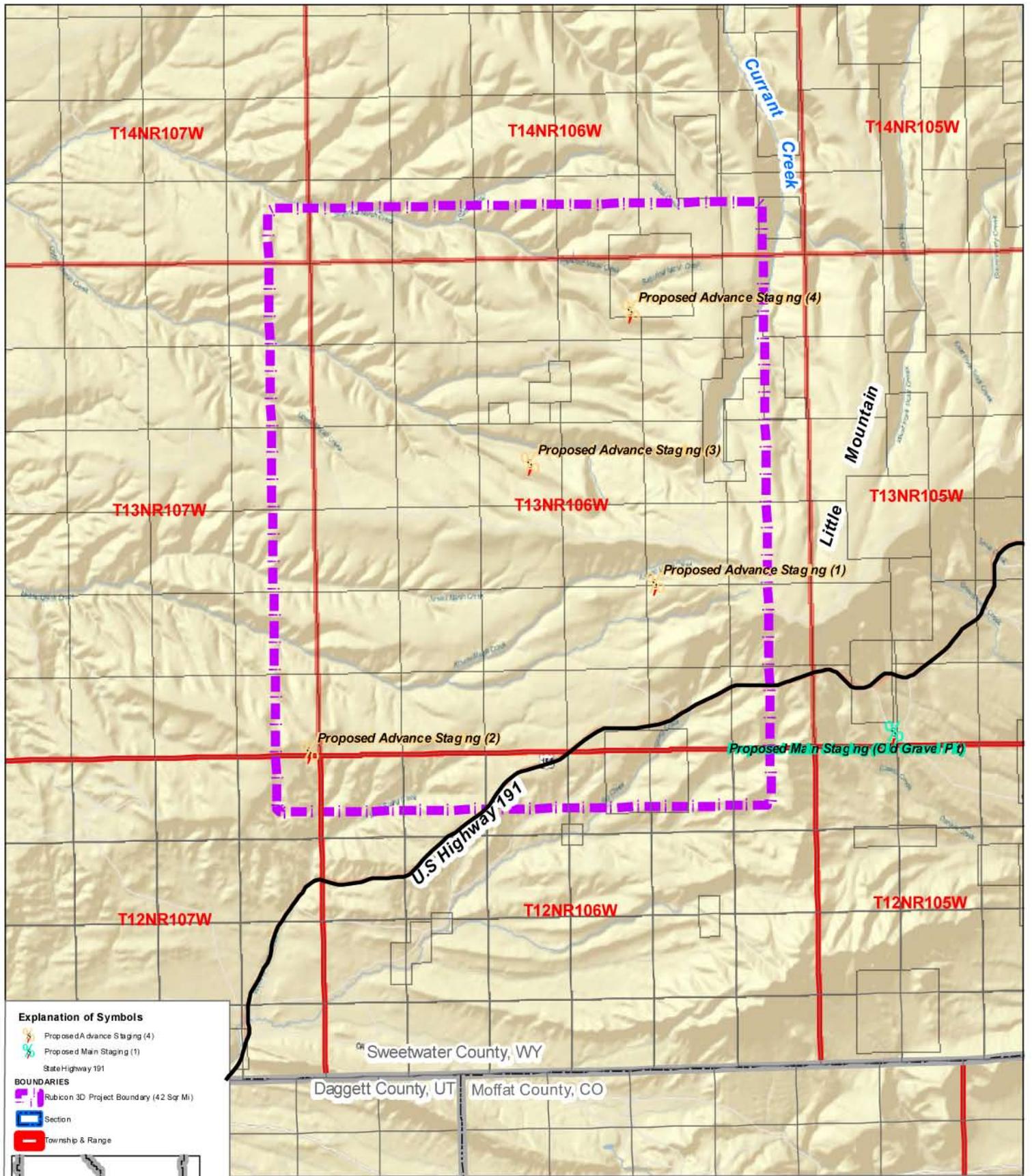
#### **Project Description**

Devon Energy Production Company LP (Devon) has notified the Bureau of Land Management (BLM) Rock Springs Field Office (RSFO) regarding a proposal to operate a heli-portable 3D seismic survey in Ts. 12-13 N., Rs. 106-107 W, Sweetwater County, Wyoming (see Map). The outside perimeter of the proposed survey area encompasses 41.82 square miles including 37.22 square miles of BLM-administered land, 4.09 square miles of State land, and 0.51 acres of private land. Because this project will be conducted using heli-portable procedures, actual acreage used for source and receiver lines is 135.43 acres. Staging areas will require an additional 12.5 acres.

In order to reduce potential environmental impacts, the Rubicon 3D Seismic Survey project will utilize 3D recording techniques that will provide high resolution of subsurface geological formations. These features may provide images that indicate the potential for hydrocarbon accumulation. This 3D data set will provide Devon with a tool for determining and evaluating potential future drilling operations. Future surface disturbance may be substantially reduced after evaluations are made by Devon technical staff.

The project will be conducted using heli-portable drilling and recording techniques. No vibroseis vehicles will be used. Light trucks will be used when possible to ferry personnel and equipment to various sites, but will only travel on pre-approved access routes. These access routes will be identified in the Environmental Assessment. In addition, all terrain vehicles (ATVs), or other similar mechanized vehicles may transport personnel and equipment on approved routes, which include existing two-track and improved roads. No mechanized vehicles will be operated during periods of saturated soil conditions when surface ruts greater than 4 inches would occur along straight traveled routes. In the event that ruts occur, caused directly by Devon's seismic operations, reclamation measures will be undertaken as soon as possible to restore these areas as close to their original condition as possible.

Field operations will be conducted from staging areas in or near the project area. Activities at the staging areas include offloading or loading of equipment from tractor trailer units, transfer of equipment to and from light trucks and helicopter(s), temporary storage of equipment, battery charging from several light trailers, minor equipment repairs, and logistical coordination. In addition, staging areas can be used as muster points should the Emergency Response Plan be enacted. Proposed Staging Areas are indicated on the map submitted and on file with the BLM. Any fuel stored on these remote sites will have secondary containment.



**Explanation of Symbols**

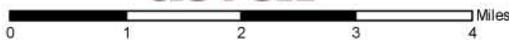
- Proposed Advance Staging (4)
- Proposed Main Staging (1)
- State Highway 191

**BOUNDARIES**

- Rubicon 3D Project Boundary (42 Sqr Mi)
- Section
- Township & Range



# Devon Rubicon 3D Seismic Survey



1:100,000

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<p>DATE: 10/20/2011          TIME: 10:00 AM          SCALE: AS SHOWN          SHEET NO. 1 OF 1</p>			

Based on current planning, the project is expected to begin in the northwest corner and proceed in a generally southerly direction.

Devon will hire and direct the operations of various contract permitting, survey, drilling, recording, and reclamation contractors necessary to conduct the survey. Devon and its contractors will comply with all Federal, State, and local laws and regulations. During the process required by the National Environmental Policy Act of 1969 (NEPA), Devon and the RSFO for the BLM will agree upon specific special mitigation measures and conditions of approval for the program.

This project is divided into four activity segments as outlined below. Time lines are tentative due to uncertainty of weather conditions. A detailed schedule will be provided as early as possible prior to any field activities.

### **Archaeology Survey**

Prior to starting field work, a registered archaeologist will complete a Class I Archaeological survey to identify previously recorded archaeological, historic, or prehistoric sites within the project area.

During the Class III clearance, the archaeologist will work behind the survey crew identifying previously unknown additional archaeological sites and flagging them for avoidance. The archaeological clearance will consist of a corridor of 50 feet from the centerline of the source point location on each side for the length of the source lines. This would create a contiguous 100-foot swath down line.

The archaeologist will utilize a unique color of flagging to mark areas for avoidance. If an access route or source point falls within a site, the archaeologist will flag the site and re-route the access flagging. The surveyors will be notified and source points that fall within the site will be relocated.

Vehicular traffic will only be allowed on existing two-track or improved roads. These areas will be restricted to foot traffic and recording equipment only. The project manager and surveyor will work closely with the archaeologist to ensure a safe, thorough, and timely survey. Devon, or its contractor, will develop a Travel Plan for the project identifying by GPS existing two tracks that will be utilized. Once the Travel Plan has been completed, any two tracks used for this project will be surveyed for Class III clearance. This will also include all helicopter Landing Zones (LZ). All staging areas located on BLM-administered lands will be surveyed by the archaeologist and approved by the BLM.

To conduct the project as expeditiously as possible, the archaeological reports will be submitted in two phases split approximately between Receiver Line 189 and receiver Line 185. This will allow drilling operations to commence from the North half in those areas that have been cleared and approved.

### **Source Point Survey**

The ideal location of source and receiver points is determined prior to survey commencement. Pre-plot coordinates are sent to the surveyor who in turn uploads this to the GPC receiver. Using only source point coordinates, a team of 10 GPS operators will walk from source point to source point (in this case 220 feet). When the location of the GPS operator matches the ideal location, the spot will be marked with a wooden hub and/or surveyors flagging.

GPS operators will be dropped off each morning and picked up each night at whatever nearby existing road or trail is convenient. Truck or ATV traffic will **NOT** be allowed off existing two tracks or improved roads. In very hilly or remote terrain personnel and equipment may be shuttled with the helicopter. All personnel or teams of people will carry handheld radios and, if required, survival packs in remote areas.

The survey team will also erect temporary towers and radio transmitters at several locations throughout the project area (usually on hill tops). These sites are used to transmit GPS corrections necessary for real time, high accuracy positioning. It may be necessary, based on individual source point conditions, to move the source point (e.g., terrain too steep to safely land the helicopter). In these cases, source points may be moved as much as 1,000 feet to a more suitable location. Skid and offset locations as well as the helicopter Landing Zones (LZ) are thoroughly inventoried, documented, and mapped.

During source point layout, GPS operators will make sketches of obstacles, hazards, and archaeological site and exclusion zones. This “hazard” map will contain the entire post plot positions of the source and receiver points surveyed. This will be used by all of the crew and forwarded to the BLM.

### **Resurvey**

Using methods and procedures outlined above, re-survey will be necessary to replace hubs and or lathe and markers previously established for the archaeology survey that are destroyed by wind, wildlife, or livestock.

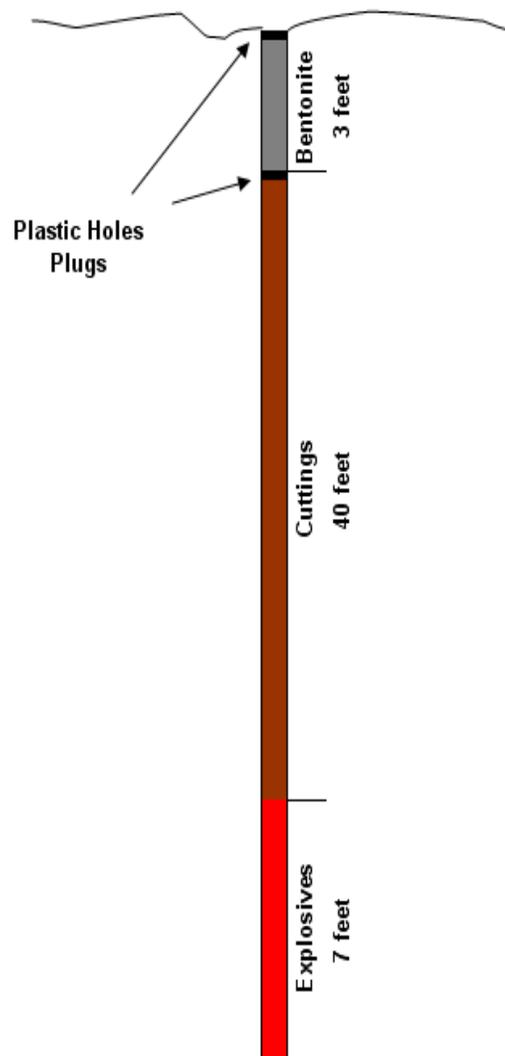
The survey crew will concentrate on re-survey, or source points to enable uninterrupted progress of drilling operations. When source points are complete, layout of receiver points will start. Source and receiver points will be marked with lathe, flagging, and a 1-foot diameter spray paint mark.

### **Shot Hole Drilling**

Shot holes will be drilled using heli-portable drilling equipment. Shot holes will not be drilled closer than 1,320 feet from any springs. A ground-based drilling coordinator operating on foot will locate the surveyed shot hole location. The coordinator will then direct the helicopter via VHF radio communication to set the drill on location. Up to 10 drills could be utilized concurrently using this program. The drill is operated by a driller and drill helper. Drilling activities will take place only during daylight hours. The drilling crews may be flown to their drill site every morning by helicopter and picked up at night.

The rigs consist of a drill unit and a compressor unit, each weighing approximately 1,600 pounds. All industry safety requirements are met. All rigs are audited, prior to commencement of drilling, and a daily inspection of each unit is documented. Each unit is transported from source point to source point by a Bell 205 “Huey”, or equivalent helicopter, and set down beside each other. The drill and compressor are connected using “quick connect” air and hydraulic fittings. Drill cuttings from the hole are brought to the surface using compressed air.

Upon completion of the hole, 10 pounds of explosives are loaded into the hole. The remainder of the hole is back filled and tamped using drill cuttings and 20 pounds of bentonite (see diagram). The shot holes will be plugged in accordance with the Wyoming Oil & Gas Commission rules and regulations.



Access to shot holes in sensitive areas will be approved before they are drilled. Explosive storage and staging areas are planned to be on fee or state land. If no suitable sites can be found on these lands, the BLM will be contacted for possible locations on federal lands. If locations are selected on BLM-administered properties, they will have archaeological clearance prior to entry.

Prior to deployment on the project area, equipment will be power washed to prevent spread of noxious weeds.

### **Detonation and Recording**

The survey will utilize helicopter and ATV support for moving recording equipment. Helicopters will utilize navigational devices which allow for accurate deployment of recording equipment regardless of ground cover. Post plot coordinates generated by the survey crew are uploaded into the device. The accuracies are within a few square feet. The crew may utilize ATVs on pre-approved access routes, where possible, to assist in troubleshooting recording equipment and move personnel. The crew will be provided with updated hazard maps showing approved drive routes and areas of avoidance. They will also receive this information at a start up meeting prior to entry into the field.

During the recording phase, a minimum of 26 lines of recording equipment will be active at any given time. The “spread” (area occupied by live recording equipment), will encompass approximately 24 square miles. The parallel receiver lines are 880 feet apart with 220-foot intervals between receiver points. The parallel source lines are 1,980 feet apart with 220-foot intervals between source points. Source lines run north-south while receiver lines run east-west.

The survey must be recorded in a sequential manner, beginning at one end of the project and working through to the opposite end. The design of this 3D grid requires the survey to be recorded north to south.

Two-man teams of “shooters” will move down the source lines detonating the charges. There may be as many as 5 of these teams spread out on the active spread. Actual detonation of the charges is controlled by the observer in the recording vehicle. A sequence of procedures is completed prior to any detonation to ensure safe operations. Depending upon site-specific conditions, this process can take up to ten minutes between detonations or happen as quickly as 2-3 minutes. Conditions which may prevent the recording crew from recording the data are lightening; strong winds; animals chewing on the recording equipment; cattle, horses, or human vandalism disrupting the geophones; or surface noise created by vehicles or other industrial equipment.

A main staging area with a landing zone (LZ) will be utilized to bag and prepare equipment to be transported by helicopter. Staging areas are located on previously disturbed areas when possible and usually encompass approximately a 200-foot radius. Crew vehicles may be parked at the staging area as well as several 45-foot trailers. Mini LZs may be utilized in some remote areas to reduce helicopter flight time and speed the progress of the seismic program. An equipment truck may transport bagged equipment to a well pad or similar area utilizing existing two tracks or improved roads where the helicopter utilizing a long-line will pick up equipment and fly it to

nearby receiver lines. The seismic contractor will attempt to locate staging areas on private or State of Wyoming land when possible. All staging areas located on BLM-administered lands will be surveyed by the archaeologist and approved by the BLM.

A crew of approximately 45 people will perform operations 7 days a week for approximately 45 days during the recording phase. The majority of troubleshooting (locating and replacing bad equipment) will be completed on foot. The majority of crew will stay in Rock Springs and will be transported by bus to the main staging area in the morning after a safety and briefing meeting.

### **Safety**

Keeping all workers and the public safe is of utmost importance to Devon. All contractors must adhere to Devon's comprehensive Geophysical Safety Guidelines policy. The contractor's corporate safety manual also addresses potential safety issues. Devon has a dedicated Geophysical Safety Coordinator who works closely with contractors to ensure compliance with all safety rules and regulations. Daily safety meetings are held with all contractors and documented. Devon and its contractors will have firefighting apparatus on hand in various locations throughout the project area. Helicopter "Bambi Buckets" will also be placed in staging areas to allow for rapid deployment. Water source areas will be identified prior to start-up of recording or drilling operations. Fire drills will be conducted on a regular basis.

Safe handling, transportation, and storage of explosives are of primary importance. These activities are strictly regulated by policies and procedures of several federal agencies. Explosives will be transported in industry-standard portable magazines. Explosives will be handheld under the care and control of personnel possessing a federally-approved explosives handling license. Storage of explosives will be in an approved magazine, temporarily established near or within the project area. The magazine will be accessible by truck and under the care and control of licensed personnel. Explosives not loaded into a shot hole must be returned to the central magazine each night and logged. A strict inventory is maintained.

An Emergency Response Plan (ERP) will be created prior to the activity commencing. In the unlikely event of a medical evacuation, the ERP will be initiated. The ERP will be provided to BLM prior to approval of the Environmental Assessment Decision Record.

If outside security is warranted onsite, Devon will provide the necessary personnel to secure the project area.

### **Impacts and Mitigation**

The greatest impact of this operation will likely be the helicopter-generated noise. Impacts resulting from the actual drill operations will be limited to dust covering vegetation within an approximately 30-foot radius depending on local wind conditions. Drill cuttings will be spread over an area with approximately a 3-foot radius and not exceeding 2 inches deep.

The survey will be conducted in a remote area approximately 50 miles south of Rock Springs. There are few people living in the project area and when encountered will be treated with the utmost respect. Buffers will be implemented with 1,320 feet from any springs, 500 feet from riparian vegetation, and 100 feet from the inner gorge of ephemeral channels.

Crews will be instructed to avoid overflights of domestic and wild animals. Harassment of wildlife and livestock or otherwise impeding their movement will be strictly forbidden. Crew members will not be allowed to carry firearms.

The crew will not use power or hand tools to fell, or otherwise harm, native or non-native vegetation. Source and receiver lines will be accessed on foot, assuring disturbance to the land to be negligible. Mechanized vehicles will only be permitted access on pre-approved routes.

Total overall impact from this type of seismic heli-portable methodology is minimal and is short term in duration. Linear lines will not be visible from the air or on the ground during or after the acquisition is complete. Shot holes will be unidentifiable the year following the seismic acquisition, but will then return to pre-disturbance conditions. All debris will be removed from the area.

### **Reclamation**

Project reclamation will proceed concurrently with completion of recording operations. All pin flags, flagging, and trash will be collected as the program progresses. Reclamation measures will be undertaken as soon as possible to restore areas as close to their original condition as possible. As the program progresses forward, a final inspection will also be completed.

Reclamation will be planned for any staging area on BLM-administered land and will include the planting of approved weed free certified native seed as approved by the authorized BLM official. In the event that rutting of roads or trails occurs, repairs will be conducted prior to the crew departing the area. Damages to roads and trails will be documented and reported to the BLM. Reclamation will, to the extent possible, repair the damaged area to as close to its original condition as possible. Failure of crew personnel to follow these and other plan or action commitments is grounds for immediate dismissal.

### **Relationship to Existing Plans and Documents**

The document that directs management on federal lands within the RSFO is the 1997 “Approved Record of Decision (ROD) for the Green River Resource Management Plan (RMP).” The objective for management of oil and gas resources, as stated in the Green River RMP, is to provide for leasing, exploration, and development of oil and gas while protecting other resource values. In addition, the Green River RMP states that public lands within the project area are open to mineral leasing and development to promote mineral recovery on behalf of the United States, along with appropriate mitigation of disturbance on a case-by-case basis.

Seismic exploration for oil and gas reserves within the project area is in conformance with the Green River RMP. The environmental analysis that will be prepared for the proposed project will incorporate decisions, terms, and conditions of use as described in the Green River RMP.

### **National Environmental Policy Act**

The proposed project will be analyzed in accordance with the requirements of the National Environmental Policy Act of 1969 (NEPA). To comply with NEPA and applicable Council on Environmental Quality (CEQ) regulations implementing NEPA, the BLM is required to prepare

an environmental analysis. For this project, the required environmental document will be an environmental assessment (EA). It will serve the following purposes:

- Provide the public and government agencies with information about potential environmental consequences of the project and alternatives;
- Identify all practicable means to avoid or minimize environmental harm from the project and alternatives; and
- Provide responsible officials with information upon which to make an informed decision regarding the project.

One element of the NEPA process is “scoping.” Scoping activities are initiated early in the process to:

- identify reasonable alternatives to be evaluated in the environmental analysis;
- identify issues of environmental concern related to the proposed project; and
- determine depth of analysis for issues addressed in the EA.

This Scoping Statement has been prepared to enable governmental agencies, the general public, and other interested parties to participate in and contribute to the analysis process. Public input is important in establishing the scope of analysis for any NEPA document so the BLM encourages public participation.

### **Preliminary Resource Management Issues, Concerns, and Opportunities**

The following issues and concerns have been identified by an interdisciplinary team of resource specialists. The issues identified below are not meant to be all-inclusive, but rather a starting point for public input.

- Potential increased traffic and associated impacts on existing county, state, and BLM roads;
- Potential socioeconomic impacts to local communities;
- Potential impacts to surface water and groundwater resources, including riparian areas;
- Potential impacts related to reclamation of disturbed areas and control of invasive plants;
- Potential conflicts with livestock operations within the project area;
- Potential impacts to cultural and historical resources within the project area;
- Potential impacts to wildlife habitats and populations within the project area, including big game and raptors;
- Potential impacts to threatened, endangered, or sensitive plant and animal species, including the midget-faded rattlesnake and pygmy rabbit;
- Potential conflict between the proposed action and recreational opportunities including hunting;
- Potential cumulative effects when combined with other ongoing and proposed developments.

### **Interdisciplinary Team**

Based upon current understanding of issues, concerns, and opportunities, an interdisciplinary team (IDT) comprises the following resource specialists:

- IDT Leader
- Air Quality Specialist
- Soil Scientist
- Rangeland Management Specialist
- Archaeologist
- Geologist
- Realty Specialist
- Transportation Specialist
- Outdoor Recreation Planner
- Hydrologist
- Petroleum Engineer
- Wildlife Biologist
- Fisheries Biologist
- Botanist
- Wild Horse Specialist
- Socioeconomic Specialist
- Public Affairs Specialist
- Natural Resources Specialist
- Planning and Environmental Coordinator
- Writer/Editor

### **Public Input**

Public input is important in establishing the level and scope of the analysis necessary. The public is encouraged to participate throughout the environmental analysis process to help identify the level of analysis needed, alternatives to the proposed action, other issues or concerns that should be analyzed, mitigation opportunities, and any other comments or ideas to help ensure the completeness of the analysis process. It would best serve the needs of the BLM for a concentrated analysis if scoping comments are submitted by June 10, 2008, allowing a 30-day comment period.

Please submit comments to:

Jeromy Caldwell, Natural Resource Specialist  
Bureau of Land Management  
Rock Springs Field Office  
280 Highway 191 North  
Rock Springs, Wyoming 82901

***Or Email:*** rock\_springs\_wymail@blm.gov (Please add "Rubicon 3D Seismic Survey" in the Subject line.)

**Initial Mailing List**

The initial mailing distribution for this Scoping Notice includes the following agencies, organizations, and media, in addition to leaseholders and individuals.

**Local Government**

City of Rock Springs  
Sweetwater County  
Sweetwater County Conservation District  
Sweetwater County Extension  
Sweetwater County Weed and Pest

**Educational Institutions, Universities, and Museums**

Library-University of Wyoming  
Sweetwater County Library  
University of Wyoming American Studies Program  
University of Wyoming Dept. of Anthropology  
University of Wyoming Natural Diversity Database  
University of Wyoming Renewable Resources  
Western Wyoming Community College  
Wyoming Association of Professional Archaeologists  
Wyoming Association of Professional Historians

**Environmental or Conservation Groups**

American Lands Alliance  
Animal Protection Institute of America  
Biodiversity Conservation Alliance  
Center for Native Ecosystems  
Defenders of Wildlife  
Earthjustice Legal Defense Fund  
Environmental Defense Fund  
Land and Water Fund for the Rockies  
Mormon Trails Association  
National Pony Express Association (NPEA)  
National Wildlife Federation  
People for the USA  
People for the West  
People for Wyoming  
Predator Project  
Public Lands Foundation

Rocky Mountain Elk Foundation  
Sierra Club  
Southwest Wyoming Mule Deer Foundation  
The Alliance for Historic Wyoming  
The Nature Conservancy  
Theodore Roosevelt Conservation Partnership  
The Wilderness Society  
Trout Unlimited  
Western Watersheds Project, Wyoming Office  
Western Wyoming Mule Deer Foundation  
Wildlife Management Institute  
Wyoming Advocates for Animals  
Wyoming Conservation Voters  
Wyoming Outdoor Council  
Wyoming People for the USA  
Wyoming Wilderness Association  
Wyoming Wildlife Federation

**Federal Agencies**

Federal Aviation Administration  
Federal Energy Regulatory Commission  
Office of Environmental Policy and Compliance  
U.S. Army Corps of Engineers  
U.S. Department of Agriculture  
U.S. Department of Energy  
U.S. EPA, Region 8  
USDA Natural Resources Conservation Service  
USDI Bureau of Reclamation  
USDI Minerals Management Service  
USDI National Park Service-Long Distance Trail Office  
USDI Office of Surface Mining  
USDI Office of the Regional Solicitor

**Federal Elected Officials**

U.S. Representative Barbara Cubin  
U.S. Senator Mike Enzi  
U.S. Senator John Barrasso

Trade Groups

Independent Petroleum Association of  
Mountain States  
Southwest Wyoming Industrial Association  
Southwest Wyoming Mineral Association  
Petroleum Association of Wyoming  
Public Lands Advocacy  
Wyoming Business Alliance  
Wyoming Mining Association

Media

Casper Star-Tribune  
Rock Springs Daily Rocket-Miner  
Green River Star

Other

Advisory Council on Historic Preservation  
National Trust for Historic Preservation  
Natural Resources Defense Council  
Western Governors' Association  
Western Wyoming Resource Conservation  
& Development  
Wyoming Association of Municipalities

Public Land Users or User Groups

Oregon-California Trail Association  
Rock Springs Grazing Association  
Wyoming Farm Bureau Federation  
Wyoming Public Lands Council  
Wyoming Sportsman's Association  
Wyoming State Grazing Board  
Wyoming Stock Growers Association  
Wyoming Wool Growers Association

State Agencies/Boards

Department of Agriculture  
Department of Environmental Quality  
Department of Game and Fish  
Department of Revenue  
Department of Transportation  
Geological Survey  
Oil and Gas Conservation Commission  
Planning Office  
State Engineer's Office  
State Forestry Division

State Historic Preservation Office  
State Lands and Investments  
Wyoming Business Council  
Wyoming Livestock Board  
Wyoming Outfitters and Guides Association  
Wyoming State Library  
Wyoming State Museum

State Elected Officials

Governor Dave Freudenthal  
Representative Stan Blake  
Representative Bernadine Craft  
Representative Kathy Davison  
Representative Allen Jaggi  
Representative Marty Martin  
Representative Bill Thompson  
Senator Stan Cooper  
Senator John Hastert  
Senator Rae Lyn Job

Tribes

Eastern Shoshone Tribe  
Northern Arapaho Tribe  
Northern Ute Tribe  
Shoshone-Bannock Tribe