QUESTIONS AND ANSWERS
FOR THE
VERITAS UINTAH 2D PROJECT

WHAT IS THE PURPOSE OF THE VERITAS' UINTAH TWO-DIMENSIONAL (2D) GEOPHYSICAL SURVEY PROJECT IN UINTAH COUNTY?

The goal of this project is to utilize 2D seismic data to help delineate areas in the Uinta Basin that may have potential for oil and gas exploratory drilling. No exploratory or development drilling are proposed in this project.

The Uinta Basin, and in particular, Uintah County, Utah, have an established history of oil and gas exploration, development, and production. The majority of the project area is open to oil and gas production and development, and, is already under lease. Over 3000 producing oil and gas wells and service wells are in the Uinta Basin.

Two-Dimensional seismic surveys have occurred previously in this project area. However, these surveys were conducted several years ago and recent data recording and processing techniques have been developed that are not fully compatible with the older, vintage data. In addition, this project assesses oil and gas potential over a much larger areal extent; whereas, past projects have been more limited in size.

The hope is that with the addition of data recording using today's technology, areas that may have a higher potential will be identified. If such areas are found, the exploratory well success would substantially increase and the number of unproductive exploration wells decrease along with the associated surface disturbance.

Please see Sections 1.0 and 2.0 of the Environmental Assessment (EA).

WHERE WILL THE SEISMIC SURVEY BE CONDUCTED?

The project is located in the Uinta Basin of Northeast Utah. The seismic lines are in the southeast portion of Uintah County. The majority of the lines are located east of the Green River; south of the White River; and, to the Colorado State line.

The 2D geophysical survey would occur in a 3,168 square mile area of southeast Uintah County, on 17 source lines ranging in length from 14.5 to 37.7 miles. About 457 miles of source lines would cross the project area. Actual total surface disturbance is estimated at 381 acres.

Please see Sections 1.0 and 2.0 of the EA. Location maps are also found on this web site.

HOW DO GEOPHYSICAL OPERATIONS WORK?

Seismic operations are tools for analysis of geologic formations and structural features in the subsurface. The process consists of utilizing a source of energy that is directed into the rock formations. For this project, shot holes would be drilled to a depth of 60 feet and a small explosive detonated as the source of energy. The energy waves travel through, and are reflected back to the surface by the subsurface rock where the data is recorded. Various types of rock reflect the energy waves differently. Data from the processed information would help show the depths to and thicknesses of formations and structural features present in the subsurface. The processed information can identify conditions in the subsurface that are favorable for the possible accumulation of oil.

WHAT IS TWO-DIMENSIONAL (2D) TECHNOLOGY?

In 2D seismic surveys, the receiver (geophones) lines follow the lines of source points (shot holes). The 2D surveys collect data along the single line of source points and receivers. Although multiple lines may run parallel to each other, subsurface data between the lines must be largely interpolated between the lines.

WILL THIS OPERATION USE VIBROSEIS TRUCKS?

No. This operation will use shot hole techniques.

Older, vintage 2D seismic data available in the Uinta Basin is outdated and antiquated. It is not fully compatible with today's technology. Shot hole methodology entails the drilling and detonation of underground charges to produce seismic waves that are recorded at the surface. Four-inch diameter shot holes would be drilled to depths of approximately 60 feet at 330-foot intervals along each line. The portable drill equipment would be transported by truck (similar to a small water well rig), buggy, or helicopter depending on terrain or resource considerations. Existing road and trail networks would be used whenever feasible. Please see the photos on this web site.

Please see Section 2.0 of the EA.

WERE ANY ALTERNATIVE METHODS OF DOING SEISMIC WORK CONSIDERED?

Different types of geophysical techniques were considered and rejected in the Environmental Assessment (EA). These included vibroseis; utilizing heli-portable drilling rigs to drill all the shot holes; or, explosives detonated at the surface (poulter shots). There are no other alternatives to acquire seismic data. Rough terrain precluded the vibroseis technique, and other alternatives were rejected due to technical insufficiencies and/or prohibitive costs. Various combinations of heli-portable drilling in BLM Wilderness Study Areas, BLM Wilderness Inventory Areas, and Utah Wilderness Coalition submitted areas were also considered.

Please see Section 2.2 of the EA.

WILL THE COMPANY BE ALLOWED TO BULLDOZE NEW SEISMIC LINES?

The company did not propose to use bulldozers, and the approved permit will not allow such use.

Please see Section 2.1 of the EA.

HOW LONG WILL THE PROJECT TAKE?

It is estimated that the entire project can be completed in 150 to 175 days spread over a two year period.

HAS THIS AREA BEEN DEVELOPED?

The term “field development” has specific connotations for the oil and gas industry and BLM. The term typically implies that an oil and gas reservoir is completely understood and mapped and that “development” wells can be accurately sited and drilled with minimal risk. This is not the case for all of this project area. Although numerous commercial wells have been drilled and are producing in the area, the fact that dry wells (noncommercial) have also been drilled in the area where production would have been expected indicates the reservoir characteristics are not well defined or understood. Subsequently, BLM believes the entire project area cannot be considered “developed”. Data from this seismic survey should help greatly in determining if there are undrilled areas that are promising and to what extent and where such exploratory drilling would occur.

WHY WAS AN ENVIRONMENTAL ASSESSMENT (EA) PREPARED INSTEAD OF AN ENVIRONMENTAL IMPACT STATEMENT (EIS)?

The EA for the seismic survey was prepared in accordance with 40CFR 1501.3(b) and 1501.4(2)(c) that indicate an agency may prepare an EA in order to assist agency decision making and to assess whether or not to prepare and EIS. It was determined that the proposed action would not have a significant impact on the human environment and therefore, an EIS was not required. Geophysical surveying techniques have vastly improved over the last few decades. The operations are light on the land. Stringent reclamation and operational requirements have been incorporated into the permit to minimize impacts to surface resources.

WERE MITIGATION MEASURES DEVEOLPED FOR THIS PROJECT?

Yes. Special Conditions were attached to the Decision Record along with Form 3150-4a, Terms and Conditions for Notice of Intent to Conduct Geophysical Exploration . These stringent requirements in addition to the standard terms and conditions will provide the appropriate mitigation.

Please see the Special Conditions attached to the Decision Record.

WILL THE PROJECT BE MONITORED BY THE BLM?

Yes. It is our intent to maximize the BLM's field presence throughout the duration of the project. In addition to BLM staff, other monitoring capabilities by quality control inspectors will be contracted.

HOW WAS THE PUBLIC INFORMED OF THIS PROJECT?

On July 10, 2002, an EA was released for a 30-day public review period. The review period was further extended to September 3, 2002. The EA was also made available for review and comment on the Vernal Field Office internet home page. Local media releases notified the public of the public review period and that copies of the EA were available at the BLM Vernal Field Office.

WERE STATE AND FEDERAL AGENCIES AND TRIBES CONTACTED?

BLM worked closely with a variety of state and Federal agencies during the evaluation of the proposed project. Consultation with the U.S. Fish and Wildlife Service on threatened and endangered plants and animals was completed. The State Historic Preservation Office was also consulted. The U.S. Geological Survey, natural Resource Conservation Service And the State of Utah Department of Natural Resources were also contacted.

In June 2002, BLM met with the Northern Ute Tribal Business Committee and discussed the project. The Committee had no formal opinion. Other tribes with cultural interest in the area were contacted via letter. The Hopi Tribe and the Southern Ute Tribe provided written comments to the BLM.

Please see Sections 1.3, 6.0 and 8.0 of the EA

WHAT WAS THE AMOUNT OF PUBLIC INPUT THAT BLM RECEIVED DURING THE PUBLIC REVIEW PERIOD?

About 25000 comments were received by BLM concerning the EA. Comments were received from a variety of individuals, groups, and agencies such as: Congressman Maurice D. Hinchey, Environmental Protection Agency, Independent Petroleum Association of mountain States, Mountain Defense League, National Trust for Historic Preservation, Natural Resources Defense Council, Petroleum Association of Wyoming, Southern Utah Wilderness Alliance, State of Utah Governor's Office of Planning & Budget, State of Utah Trust Lands Administration, and the Utah Chapter of the Sierra Club. All comments were received were carefully considered. The relevant issues contained in the comments were addressed and incorporated as appropriate into the final EA and Decision Record.

Please see Section 6.0 of the EA.

HOW WILL THIS PROJECT AFFECT CULTURAL RESOURCES?

BLM has required the project proponent to hire a qualified professional consulting firm to inventory all staging areas, access routes, and seismic lines. BLM also required that all cultural resources located during these intensive inventories be recorded, and evaluated for eligibility to the National Register. BLM has required the proponent to work with the consulting firm to avoid all cultural resources encountered, by inventorying new staging areas, access routes, or seismic lines to assure avoidance of cultural resources.

The seismic survey is being conducted in two phases. All inventories for the first phase have been completed. A total of 101 cultural resource sites were recorded by the first phase inventory. A report was prepared and submitted to BLM detailing avoidance measures for each site. Because these resources have been found and documented, with avoidance of each location planned by the proponent and approved by BLM, no impacts to cultural resources are anticipated.

BLM submitted the inventory report to the Utah State Historic Preservation Officer (SHPO) for review and consultation in accordance with Section 106 of the National Historic Preservation Act. The SHPO concurred in a finding of “No Historic Properties Affected”. BLM also sent copies of the report to the National Trust for Historic Preservation as a consulting party, and to the Northern Ute Tribe and Hopi Tribe for review.

BLM will require the proponent to complete intensive inventories for the remaining staging areas, access routes, and seismic lines in Phase Two prior to allowing operations to commence. Inventory work and reporting requirements will be the same as in Phase One.

Please see Sections 2.1.5.4, 3.6, and 4.6 of the EA.

WILL THIS PROJECT AFFECT RECREATIONAL USE OF THE AREA?

The project area receives dispersed recreation use. This use is primarily for hunting and off-highway vehicle (OHV) recreation. Hunting for big and small game totals about 4000 user days per year. About 60% of the project area is classified as open for cross-country travel. The remaining 40% is designated as limited to existing routes, with additional seasonal limitations during periods of wet soils and critical wildlife periods.

The Utah Division of Wildlife Resources manages the Book Cliffs south of the White River for limited entry hunting of larger-bodied, antlered deer and elk. About 470 buck deer tags and 83 bull elk tags are issued yearly. Hunters who receive hunting tags could have a diminished hunt if game relocates because of the project. Scheduling and location information will be posted on three kiosks in the Book Cliffs to alert hunters to this possibility. The effect would be one season in duration.

Reclamation and signage would limit new OHV use of the cross-country seismic lines. There would be no loss of existing recreational OHV routes by completion of the project.

Please Sections 2.1.5.5, 3.9, and 4.9 of the EA.

WILL ANY SEISMIC SURVEYING OCCUR IN WILDERNESS STUDY AREAS (WSAs), BLM WILDERNESS INVENTORY AREAS (WIAs), OR AREAS PROPOSED BY THE UTAH WILDERNESS COALITION (UWC) FOR WILDERNESS?

No seismic surveying would occur in any WSA. Two areas, Desolation Canyon and White River, recently inventoried by BLM and found to have wilderness characteristics may be affected by this action.

BLM determined that portions of UWC's White River, Bitter Creek, and Lower Bitter Creek proposed wilderness units "may have" a reasonable probability of wilderness characteristics. These UWC units may also be affected by the seismic exploration.

Please see Section 3.7 of the EA for a discussion of the areas that may be affected by this action.

HOW WILL SEISMIC SURVEYS AFFECT AREAS FOUND TO HAVE WILDERNESS CHARACTERISTICS AND THE UWC PROPOSED WILDERNESS UNITS?

In the EA, BLM concluded that overall, implementation of the proposed seismic survey would result in insignificant short-term impacts to the wilderness values of recently inventoried areas and the potential wilderness values of the UWC proposed units that the BLM has determined "may have" a reasonable probability of wilderness characteristics. No area with wilderness character or UWC units that "may have" a reasonable probability of wilderness characteristics would be disqualified from consideration as wilderness study areas (WSAs) as a result of this seismic survey.

Please see Section 4.7.1 of the EA for an analysis of the impacts of the seismic survey on areas with wilderness character and the UWC proposed units that "may have" a reasonable probability of wilderness characteristics.

WHAT MITIGATION MEASURES WILL BE IMPLEMENTED TO MINIMIZE IMPACTS TO THE WILDERNESS VALUES?

Many of the terms and conditions required for this project will help protect areas being considered as WSAs. However, two specific measures are aimed directly at protection of wilderness values:

- All shot holes within BLM Wilderness Inventory Areas and UWC proposed units that BLM has determined "may have" a reasonable probability of wilderness characteristecs, will be drilled with heli-portable drills.

- No wheeled or tracked vehicles will be allowed in BLM Wilderness Inventory Areas, except on roads and routes identified by the BLM.

ARE ANY ENDANGERED SPECIES FOUND IN THE PROJECT AREA? WHAT IS BLM DOING TO PROTECT THESE SPECIES?

Four listed threatened or endangered plant species and 10 listed animal species are located or have the potential of being located within the project area. Please refer to Section 3.5 of the EA for a description of these species.

A careful examination documented in the EA determined that many of these species would not be affect by implementation of the proposed action due to avoidance. BLM then developed Special Conditions to protect the remaining species. These conditions are in addition to measures identified by the proponent as part of their proposal. As shown in the EA, BLM determined that implementation of all of these measures by the project would not adversely affect any of the remaining potentially affected listed species. Please refer to Sections 3.5 and 4.5 of the EA for further information.

Section 7 Consultation was initiated with the U.S. Fish and Wildlife Service (FWS) to ensure that these combined measures would meet the requirements of the Endangered Species Act. FWS concurred that implementation of all of the measures would adequately protect and conserve potentially affected listed species.

Appendices of the EA contain the consultation documents which are also available for inspection at the BLM Vernal Field Office and the BM Utah State Office. The FWS memorandum concluding Section 7 Consultation can be reviewed at this web site.