

**FINDING OF NO SIGNIFICANT IMPACT
and
DECISION RECORD
for
THE MERNA
3-D GEOPHYSICAL PROJECT**

EA# WY100-EA02-309

Sublette County, Wyoming

**U.S. Department of the Interior
Bureau of Land Management
Pinedale Field Office**

The Bureau of Land Management is responsible for the balanced management of the public lands and resources and their various values so that they are considered in a combination that will best serve the needs of the American people. Management is based upon the principles of multiple use and sustained yield; a combination of uses that take into account the long-term needs of future generations for renewable and nonrenewable resources. These resources include recreation, range, timber, minerals, watershed, fish and wildlife, wilderness, and natural, scenic, scientific, and cultural values.

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Finding of No Significant Impact -- Based on the analysis of potential environmental impacts contained in Environmental Assessment WY100-EA02-309 for the Veritas Merna 3-D Geophysical Project, I have determined that the proposed project is in conformance with the Pinedale Resource Management Plan (RMP) and that with the BLM standard practices applied to surface-disturbing activities, and the additional mitigation identified in the EA, the project will not have significant impacts on the human environment and an EIS is not required.

The proposed action for EA02-309, addressed conducting a 265 square mile geophysical project. *(Note: Veritas initially proposed the project area to be approximately 290 square miles, but prior to the commencement of the Environmental Assessment (EA) dropped the northern 3 miles from the proposal. The area dropped adjoined the US Forest Service boundary near the Hoback Rim and included the Hoback Ranches subdivision. The stated reason for removing this area from the project was the projected expense. This area is heavily forested which precludes access by vibroseis or drill buggies; consequently small portable equipment (drills) would be required. Veritas felt the cost of the portable drills, drillers, and helicopters were not justified.)*

The project area is depicted on Map 1 in the EA and would be comprised of approximately 40 percent Federal (BLM) land, 55 percent private land, 5 percent state land. Proposed operations would include both vibroseis and shot-hole energy sources. The vibroseis (vibe) ops would be completed using two sets of vibrator buggies (4 buggies/set). The shot-hole ops would involve buggy-mounted drills with 52-inch wide high floatation tires. The drill buggies would be primarily used on hayfields and riparian areas on private land. Some shot holes would also be located in riparian areas on BLM-administered lands where vibe buggies are not allowed. The shot-holes would be drilled up to 200 feet deep and loaded with explosive charges. Recorder cable would be placed by helicopter and hand crews.

Decision -- It is my decision to authorize the Merna 3-D Geophysical Project (i.e., the Proposed Action) with the stated BLM standard practices applied to surface-disturbing activities and the mitigation listed in Appendix F of EA02-309.

Rationale For Decision -- The decision to implement the proposed action, with the BLM standard practices applied to surface-disturbing activities and the additional mitigation listed in EA02-309 will not result in unnecessary or undue environmental degradation and is in conformance with the Pinedale RMP, approved on December 12, 1988.

The EA addresses the area of effect and analyzes the anticipated impacts of conducting an intensive seismograph project. The project is located generally west of Pinedale and south of the Hoback Rim. Daniel would be in the center of the project. In addition to the proposed action, the EA also addressed a winter operations alternative, a no winter operations alternative, and a no action alternative. The following discussion provides a synopsis of these alternatives.

Proposed Action (Alternative 1): The proposed action is to conduct a 265 square mile 3D

geophysical project. The operation would predominantly be vibroseis with some shot-holes in areas, such as sub-irrigated hayfields, riparian areas, and soapholes where the vibroseis buggies would likely cause rutting. The shot-holes would be drilled using drill buggies that weigh less than 1/3 the weight of the vibre buggies. The drill vehicles would be equipped with high floatation tires to prevent rutting. The recorder cable would be deployed by helicopter and foot. Cable maintenance, surveying would be completed by personnel on ATV and foot. All vehicle operations would be spread out to prevent the creation of new two-track roads. Recording operations are proposed to commence in mid-September and are scheduled to be north of Cora Butte by Nov 15. Under this schedule operations will be off all crucial mule deer and antelope winter range, including the recent Wyoming Game and Fish Department (WGFD) crucial mule deer winter additions in the Cora Butte and Ryegrass areas, by November 15. Under this schedule the proposed operations would not commence on private lands until haying has been completed.

Operations would occur after November 15 on moose winter habitat, however activity in the crucial habitat (i.e., dense willow stands) would only consist of cable laying, removal, and shot-hole detonation, all of which would be conducted by personnel on foot. The Pinedale RMP-ROD restricts surface disturbing activity on crucial winter range from November 15 through April 30. The RMP-ROD states, *“Surface disturbance is characterized by the removal of vegetative cover and soil materials. Where actual excavation does not occur, activities may be allowed to occur with less stringent limitations provided that the objectives and purpose for the surface disturbance restrictions are met.”* No vehicle operations would be conducted in the willows during the winter season. Shot-hole drilling in the stands of willow sufficiently open to allow drill buggies activity would be completed prior to November 15. Per WGFD request, helicopter operations would maintain a minimum height of 300 feet over the willow areas. (Note: virtually all of the moose winter habitat is located on private land where the geophysical operations DO NOT require BLM authorization.)

Impacts analyzed in the EA, include short-term loss of big game forage, potential displacement of big game animals from crucial winter habitat, and raptor egg/hatchling mortality, loss of artifacts and important cultural resource data, the potential for increased erosion, effects to livestock management, damage to riparian areas and other water resources, damage to vegetation, effects to existing oil and gas facilities, effects to rural residences, effects to recreational activities, wild and scenic rivers, and public safety. The impacts were either mitigated or were not expected to be significant.

Winter Operations (Alternative 2): Under this alternative, the proposed geophysical operations would be conducted entirely during the winter with frozen ground and snow cover. Based on the analysis, winter operations would reduce the short-term effects to wildlife forage/vegetation and soils. The reduction in vegetative impacts would be a result of the snow cover cushioning plants. With the exception of impacts to wildlife private haystacks, most other impacts and mitigation from winter operations would be similar to those described for alternative 1.

Alternative 2 would, however, result in the greatest potential to adversely effect wildlife of the alternatives considered. Much of the southern portion of the M3D is crucial winter range for mule deer. The M3D also contains crucial antelope winter range and two elk feedgrounds. Operations when animals are concentrated to the winter ranges/feedgrounds would result in the highest animal to geophysical activity contact ratio possible for this project area. Winter activity would result in animal displacement. Depending on winter conditions (i.e., snow depth and temperature), forage/cover availability, and animal condition/health, displacement would potentially result in **animal death, fetal absorption, fetal abortion, and reduced breeding success**. The displacement

would also potentially cause the winter animals, especially elk, to move to haystacks on private land. Hay consumption by wildlife would reduce hay availability for livestock.

No Winter Operations (Alternative 3): This alternative was recommended by the Wyoming Outdoor Council, et. al. and would not allow geophysical operations from November 15 through April 30. As the EA stated in the description of this alternative, much of the M3D area also contains sage grouse and raptor nesting habitat. To protect birds using these habitats, operations would be prohibited during the nesting/fledging period. This would extend the no operation period to August 1, effectively leaving a 3½ month operating window. With this length of operating season, it would require two years to complete recording operations on the 265 square mile project area. Consequently, under this alternative the geophysical operations would coincide with big game migration in two different years.

It is important to note that the BLM can only impose this alternative on the BLM-administered lands within the M3D project area. The private land owners have full authority to require or to allow operations to be conducted on their lands when the least vegetative impacts would occur (i.e., when ground is frozen and snow covered). Should the private landowners decide that operations on their lands must be conducted during the winter, impacts to wildlife would be similar to those described for alternative 2.

No Action (Alternative 4): Adoption of this alternative would mean that the proposed geophysical project would not be conducted, at least not on BLM-administered lands. As stated in the Alternative 3 discussion above, “BLM can only impose this alternative on the BLM-administered lands within the M3D project area.” The private landowners can still authorize operations on their lands, even if the project is denied on Federal lands. Should operations occur on the private lands the impacts would be similar to those described for Alternative 1.

Adoption of this alternative would not preclude continued exploration through well drilling in the Merna project area. With or without the geophysical data it is likely that drilling will occur. However without the geophysical data, there is a higher potential that dry-holes would be drilled. Each dry hole drilled equates to an unnecessary and nonproductive area of soil and vegetative disturbance. Based on the Big Piney-LaBarge Coordinated Activity Plan (CAP) the average area of disturbance for a well pad and access road is approximately 5.5 acres. Adoption of this alternative would also result in the direct loss of up to 1.4 million dollars to the local economy that would have been derived through fuel, meals, lodging, and incidental purchases associated with conducting the proposed geophysical project.

The Merna 3D Environmental Assessment also addressed two alternatives that were not included in detailed analysis. The first would have involved conducting the Merna 3D Project completely via heli-portable drilling. This alternative would increase the project cost from 5.9 million dollars to more than 20 million and would increase the time needed to complete the project from 4.5 months to more than a year. It was dropped because it is not economically reasonable. The second would have precluded geophysical operations on all big game winter ranges and spring/fall transitional habitat. Nearly all of the M3D project area lies within big game winter range or spring/fall transitional habitat, consequently this alternative would be essentially the same as the No Action alternative, which is addressed in detail. This alternative would not be consistent with the Pinedale RMP-ROD that allows for a variety of activities, including geophysical, on transitional and winter habitats.

With the mitigation listed in the Environmental Consequences Section and Appendix F, none of the

alternatives would significantly alter the physical or human environment. Alternative 1 (Proposed Action) was selected because it allows oil and gas exploration to occur on 265 square miles with minimal surface impacts (i.e. approximately 2.8 percent of the project area would be driven over), because it would provide the greatest economic benefit to the local community, because it potentially reduces the amount of nonproductive soil and vegetation loss associated with drilling non-producing oil or gas wells, and because it does not result in an unnecessary or undue degradation of the environment. Alternative 2 (Winter Only Operations) was not selected because it would potentially occupy crucial mule deer and antelope winter ranges in mid- to late-winter when animals would likely be the weakest. Alternative 3 (No Winter Operations) was not selected because it would potentially result in operations occurring during the big game migration in two consecutive years, because it could only be applied to the 40 percent of the project containing BLM-administered lands, and because it does not appreciably afford more winter protection to wildlife than alternative 1 does (i.e., alternative 1 operations would be off crucial mule deer and antelope winter range by November 15 and operations in the crucial moose habitat would consist of foot traffic). The No Action alternative was not selected because it deprives the clients of the geophysical operators the opportunity to obtain substrata data for their leaseholds and it deprives the local community of an estimated \$1,400,000 of direct economic benefit. Without geophysical data, oil companies would have a higher probability of drilling non-productive wells. This equates to unnecessary surface disturbance and vegetation loss. The no action alternative would also forego the opportunity to use the subsurface knowledge to help place wells in less environmentally sensitive areas. Also like Alternative 3, the BLM could only apply the No Action alternative to BLM-administered lands.

Mitigation – The mitigation measures listed in Appendix F of EA02-309 were identified through the environmental impact analysis and will be applied to the proposed action.

Monitoring -- The geophysical project will be inspected, at minimum, on a weekly basis. The inspections will be designed to monitor environmental effects of the project and to insure that mitigation measures are in compliance. Compliance actions are to insure that these operations are conducted in accordance with the terms and conditions of the approval and associated stipulations, the elements of the proposed action (applicant committed practices), BLM standard practices applied to surface-disturbing activities, and the mitigation measures otherwise listed in the EA.

Public Involvement -- BLM issued a notice to the news media of the proposed geophysical project on June 13, 2002. Interested public were asked to comments/concerns by July 15, 2002. Twenty comment letters were received. The letters are located in Appendix C of the Merna 3D EA. Points of comment from each letter and the BLM response are located in Appendix 1, below. Note: Three additional letters of comment were received approximately a month after the comment closing date.

Appeal

This decision is effective upon the date the decision or approval by the authorized officer. This decision may be appealed the Interior Board of Land Appeals, Office of the Secretary, in accordance with the regulations contained in 43 CFR, Part 4 and form 1842. The appellant has the burden of showing that the Decision appealed from is in error.

If you wish to file a petition for stay of the effectiveness of this Decision during the time that your appeal is being reviewed by the Board, the petition for a stay must accompany your notice of appeal. A petition for a stay is required to show sufficient justification based on the standards listed on Form 1842. If you request a stay, you have the burden of proof to demonstrate that a stay should be granted.

Copies of the notice of appeal and petition for stay must also be submitted to each party (Appendix 2) named in this Decision and to the Interior Board of Land Appeals and to the appropriate Office of the Solicitor (see 43 CFR 4.413) at the same time the original documents are filed with this office.

Field Manager /s/ Priscilla Mecham **Date:** September 20, 2002