LETTER 1

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 8
999 18TH STREET - SUITE 500
DENVER, CO 80202-2466
http://www.epa.gov/region08

February 4, 2000

Ref: 8EPR-EP

VIA FACSIMILE AND MAIL

Bill McMahan, Project Manager
Bureau of Land Management
280 Highway 191 North
Rock Springs, Wyoming 82901

RE: Pinedale Anticline DEIS
CEQ # 990438

Dear Mr. McMahan:

In accordance with our responsibilities under the National Environmental Policy Act (NEPA) and Section 309 of the Clean Air Act (CAA), Region 8 of the U. S. Environmental Protection Agency (EPA) has reviewed the Draft Environmental Impact Statement (DEIS) for the Pinedale Anticline Natural Gas Field Exploration and Development Project in Sublette County, Wyoming. EPA has prepared comments that should be addressed in the Final Environmental Impact Statement (FEIS).

This DEIS analyzes the potential impacts to the human and natural environmental environment resulting from the drilling and operation of 500 to 700 producing natural gas wells located within a 308 square mile area roughly extending from the Jonah II Field on the south to the Town of Pinedale on the north. The project area contains some very unique natural resources including the New Fork and Green rivers, the historic Lander Trail, and riparian areas and wetlands associated with the New Fork and Green rivers.

EPA finds this document to be exceptionally well written and very thorough particularly with respect to the presentation of mitigation alternatives for potential environmental impacts caused by the Pinedale Anticline project. The development, of Sensitive Resource Management Zones (SRMZs) and the identification of significance criteria for environmental impacts, allows the public and the decision-maker to evaluate the effectiveness of suggested mitigation measures. These zones were adequately characterized and mapped as to where sensitive receptors occur in the project area.

5-7

The inclusion of portions of CEQ regulations in the DEIS gives the public an understanding as to what BLM's authorities are under the National Environmental Policy Act. Page 2-43 of the DEIS states "that all relevant, reasonable mitigation measures that could improve the project are to be identified, even if they are outside the jurisdiction of the lead agency or the cooperating agencies, and would thus not be committed as part of the RODs of these agencies." With this information, the state regulatory agencies, industry representatives and the public gains more insight as to why all reasonable mitigation measures can be freely analyzed in the EIS with the goal of allowing industrial development in the most environmentally responsible manner. For example, the purchasing of NO_x emission reductions by Ultra Petroleum from the Naughton Power Plant has been shown to not only have improvements in regional air quality but also to help reduce the number of days of visibility impairment in the Bridger- Fitzpatrick Wilderness Class I areas.

Appendix F presents the framework for an Adaptive Environmental Management (AEM) Plan. This effort, to our knowledge, will be the first by BLM to develop a process to ensure that environmental impacts in SMRZs will be monitored and, if impacts are considered significant, then new management options would be evaluated. EPA supports the AEM process and would like to see a commitment by BLM to include the process in the ROD. As a result of the annual development review as specified in the AEM Plan, any new management option could be incorporated by BLM into the Application for Permit to Drill. 1

A few specific comments on the DEIS document are as follows:

1. Table 2-15 "Comparison of Alternative Impacts" should categorize impacts into receptor classes such as air quality, water quality, wildlife, etc. This categorization would help the reader in the comparison of impacts to a specific resource. 2

2. Table 2-15 should summarize the cumulative visibility impacts in the Class I areas. 3

3. Table 4-2 "Summary of Federal Lease Stipulations in the Project Area" is not consistent with Table 2-8 "Summary of Mitigation Alternative Requirement". Specifically, Table 2-8 under "Standard Stipulations Alternative" states for Sage Grouse Leks "No construction activities would be allowed within 2 miles of sage grouse leks between March 1 and June 30 on Federal lands." Table 4-2 under Sage Grouse Lek states "Surface use and human activity will not be allowed within ½ mile radius of active leks 4

between midnight and 9 am from March 1 to May 15. Please clarify why the stipulations in Table 4-2 are different from those listed in Table 2-8. 4

4. Page 4-32, third paragraph states "If drilling occurs during the summer months within 350 feet of occupied dwellings, it is reasonable to conclude that drilling activities could result in sleep disturbance for adjacent residents." Please evaluate as a Resource Protection Alternative, the option of suspending drilling during the evening hours for residents that complain of noise or fumes due to the proximity of drilling to their residence. 5

5. Page 4-72. For latent cancer risk, numbers should be rounded to the unit level. For example a risk of 6.4 per million should be reported as 6 per million. In addition, exposures to all of the hazardous air pollutants should be summed to give a total risk. For Table 4-29, please present the reasoning for choosing a 4 mile distance between compressor stations and residences. 6 7 8

6. Page 3-36. Section 3.11 Air Quality and Noise - Please include a windrose representative of the project area so that residents can determine their likelihood of being impacted by air emissions resulting from drilling and operations in their area. 9

7. Page 3-45, Section 3.14.1 - RMP Management Objective. The watershed management objective is to maintain and enhance water-bodies. Page 3-50 shows Table 3-26 "Classification of Streams within the Project Area". There is also a statement that "... there is a portion of the New Fork River which is included on Table E of the State of Wyoming's 303(d) program." EPA would like additional information in the FEIS on the monitoring results for the New Fork River, and information about the watershed's current condition. As part of the Adaptive Environmental Management Plan, a water quality monitoring and assessment process will need to be established. 10 11

8. Page 3-50. The State of Wyoming appears to be in the process of reclassifying Class 4 surface waters to Class 3. Please define Class 3 surface waters in the FEIS. The water quality conditions of streams, such as the New Fork River, should be known before the final EIS is completed. Water quality monitoring and actions to protect water quality should be addressed in the Adaptive Environmental Management Plan. 12 10 11

9. Page 3-59. Federal mineral ownership and development makes development on private holdings economically feasible. BLM, as the agent of change, needs to examine the direct impacts on wetlands and riparian areas in detail. Only upland rare communities were noted in the document. BLM should investigate spring/seep/groundwater interface areas for rare flora/fauna communities. 13 14

10. Page 4-82, Section 4.13. Water resource monitoring and assessment commitments will need to be made a part of the Adaptive Environmental Management process. Wyoming looks at three required elements in their sampling program. These are chemical, physical and biological sampling. These three elements should be included in the BLM surface water monitoring commitments (only chemical and physical were mentioned in the document). Monitoring data should be archived in an accessible national data base such as STORET. 11 15 16

11. Page 4-114, Section 4.17. EPA would like to see a comprehensive monitoring program for water and wetlands in the AEM Plan. The monitoring plan should be developed as a comprehensive plan not as discrete separate plans. 17

12. Page 4-115, Sales Pipeline. "The impacts to these rivers and wetlands would depend on the crossing technique (open-cut or boring)." Please explain the difference between an open-cut or boring crossing technique. 18

13. Page 4-116, RP Alternative on All Lands and Minerals. The concept of avoiding well pad locations within 500 feet of wetlands throughout the project area including private and state lands and minerals needs to addressed in the Adaptive Environmental Management process with participation by the extra-agency work group including the COE. 19

14. Page 4-117, Section 4.17.4. "The BLM can impose measures 1 and 3 on Federal lands." Please explain what these measures are. Are they the same as mitigation opportunities? 20

15. Page 5-23 It is possible to model for the potential range of sedimentation impacts. There are many reasonable models available, NRCS has several measurement techniques, and there

are several hydro-geomorphic methods available. A reasonable estimate of the range of impacts will be needed to plan and monitor for BMPs and mitigation. 21

Based on procedures EPA uses to evaluate the DEIS and the potential environmental impact of this oil and gas project, the DEIS will be listed in the Federal Register as **LO-1** (Lack of Objections, Adequate. This rating indicates that EPA has not identified any potential environmental impacts requiring substantive changes to the mitigation alternatives. EPA supports the Resource Protection Alternative on All Lands and Minerals and the AEM Plan for monitoring and managing environmental impacts.

Thank you for the opportunity to review and comment on this DEIS. If you have any questions or concerns about our comments on this DEIS, please call me at (303) 312-6228.

Sincerely,

Cynthia Cody, Chief
NEPA Unit
Ecosystem Protection Program

cc: Bill Daniels, BLM Wyoming
Chris Shaver, NPS

5-9

LETTER 2

United States Department of Agriculture
Forest Service
Rocky Mountain Region
P.O. Box 25127
Lakewood, CO 80225-0127
Delivery: 740 Simms St.
Golden, CO 80401
Voice: 303-275-5350
TDD: 303-275-5367

File Code: 2580

Date: JAN 19 2000

Bill McMahan
Project Coordinator
280 Highway 191 North
Rock Springs, WY 82901

Dear Mr. McMahan

I would like to thank the Bureau of Land Management for inviting the Forest Service to participate on the air quality technical team for the Pinedale Anticline Project. As a Cooperating Agency on this Environmental Impact Statement, we were actively involved in air quality issues throughout the document preparation, and are confident that the protocols and data used, as well as the modeling performed, is adequate to predict expected impacts from this proposed project. I feel that this cooperative effort has resulted in an excellent analysis of the air quality issues related to this project, and look forward to similar cooperative efforts in the future. 1

Sincerely,

BJORN DAHL
Director, State and Private Forestry

cc: Bob Reese: Pinedale District Ranger, Bridger Teton NF

LETTER 3

United States Department of the Interior
NATIONAL PARK SERVICE

INTERMOUNTAIN REGION
Intermountain Support Office - Denver
12795 West Alameda Parkway
Post Office Box 25287
Denver, Colorado 80225-0287

IN REPLY REFER TO: DES 99/0053

VIA ELECTRONIC MAIL: NO HARD COPY TO FOLLOW

February 1, 2000

Bill McMahan
Project Coordinator
Bureau of Land Management
280 Highway 191 North
Rock Springs, WY 82901

RE: Pinedale Anticline Natural Gas Exploration and Development Project, Draft Environmental Impact Statement (DES 99/0053)

Dear Mr. McMahan:

The National Park Service (NPS) reviewed the air quality analysis contained in the November 1999 Draft Environmental Impact Statement for the Pinedale Anticline Oil and Gas Exploration and Development Project in Sublette County, Wyoming. The project would be located approximately 80 km southeast of Grand Teton National Park (NP), a Class I air quality area administered by the NPS. Maximum air emissions from the project would be as follows: 694 tons per year of nitrogen oxides (NO_X), 7272 TPY of volatile organic compounds, 357 TPY of particulate matter, and 1144 TPY of carbon monoxide. Our review indicates that the air quality analysis was performed correctly, and that the Pinedale Anticline project alone, as well as in combination with other oil and gas development projects proposed in the area, should not significantly affect the air quality or related values of Grand Teton NP. Regardless of the impacts at the park, we typically encourage new air pollution sources to minimize emissions whenever possible. Therefore, we urge the Bureau of Land Management to require the project proponents to install compressor engines that are capable of meeting a NO_X emission limit of 0.7 g/hp-hr, rather than allowing them to use engines that meet either 1.0 or 1.5 g/hp-hr. The proponents should also be required to explore options for reducing emissions of other pollutants. 1

If you should have any questions, please contact either Tonnie Maniero at (303) 969-2806 or me at 303-969-2377.

Sincerely,

/s/ Greg Cody
NEPA/Section 106 Specialist

bcc:
WASO Environmental Quality-2310

5-10

LETTER 4

United States Department of the Interior

FISH AND WILDLIFE SERVICE
Mountain-Prairie Region

MAILING ADDRESS:
Post Office Box 25486
Denver Federal Center
Denver, Colorado 80225

STREET LOCATION:
134 Union Blvd.
Lakewood, Colorado 80228

FWS/R6
NARD

Memorandum

To: Project Manager, Bureau of Land Management, Rock Springs, Wyoming

From: Assistant Regional Director, Northern Ecosystems, Region 6

Subject: Draft Environmental Impact Statement for the Pinedale Anticline Project

Thank you for providing the Draft Environmental Impact Statement for the Pinedale Anticline Project in Sublette County, Wyoming. My staff has reviewed this document, and we have the following comments.

General Comments

The Fish and Wildlife Service is concerned about the lack of quantitative data on potential impacts to fish and wildlife in the DEIS. We understand that exact numbers of wells and their locations cannot be determined at this time. However, the lack of information and speculative nature of potential resource impacts prevents a full understanding of how this project will affect fish and wildlife resources. At a minimum, the Final Environmental Impact Statement should incorporate data from other, similar well field developments in assessing and disclosing potential resource impacts. 1

Section 7(c) of the Endangered Species Act of 1973, as amended, requires that a biological assessment be prepared for any Federal action that is a major construction activity to determine the effects of the proposed action on listed and proposed species. The Service believes the proposed project clearly constitutes a major construction activity, with development of 300 to 900 well pads (page 1-4) and associated access roads, new gas gathering pipelines, and processing facilities. Therefore, we request a biological assessment for this project be submitted to the Wyoming Field Office. 2

The Bureau of Land Management discusses use of an adaptive environmental management plan (Appendix F). The Service supports use of such a plan, especially given the speculative nature of the DEIS. However, the plan does not specifically outline what responses will be measured and what level of impact will be used to initiate adaptive management practices. These items need to 3

be specified for each impacted resource in the FEIS so that they may be reviewed for their adequacy. The measures of impact need to be sensitive enough to allow implementation of any necessary changes before impacts to the resource become irreversible. Additionally, the Bureau needs to commit sufficient time and personnel to monitor impacts and enforce necessary mitigative changes, should they become necessary. 3

Specific Comments

Threatened and Endangered Species

Although the Bureau is requiring evaluation of prairie dog colonies for their suitability as black-footed ferret habitat and, if suitable, surveys for the ferret, we cannot concur with your determination that none of the project alternatives would adversely affect this species (page 4-124). Previous surveys indicate the probability is low of finding a ferret on colonies within the project area. However, the Bureau has not developed any protective measures which would minimize "take," as defined by the Act, should a ferret actually be located during these surveys. The loss of even one ferret would be considered an adverse affect and may jeopardize the species. All measures should be taken to ensure this does not happen. Therefore, until the Bureau develops measures to minimize impacts to black-footed ferrets, if found, we cannot concur that the project is not likely to adversely affect this species. Also, we would like to remind the Bureau that the surveys of suitable habitat must be conducted within 1 year of the surface-disturbing activity. 4

Based on the information provided in the DEIS on page 4-124, we do not believe that a buffer of 2,000 feet for no surface occupancy around an active bald eagle nest is sufficient. The study cited in the DEIS indicates that eagles may be flushed off their nest at a distance of up to 3,250 feet. The Service recommends a buffer distance of 3,500 feet for no surface occupancy. If the Bureau has additional information which indicates the proposed 2,000-foot buffer is sufficient for this area, we would reconsider our recommendations on this issue. 5

The project area does not provide much suitable habitat (wetlands) for the whooping crane, and with the Bureau's proposed wetland protective measures little habitat should be impacted. Additionally, whooping cranes would likely only use this area for migration. Given their high mobility, they should be able to locate wetlands free from disturbance if they occur in the project area. Therefore, we agree that this project is not likely to adversely affect whooping cranes, although not for the reasons presented on page 4-124 of the DEIS. 6

Water depletions in the Colorado River and its tributaries have been recognized as a major source of impact to endangered fish species. Continued water withdrawal has restricted the ability of the Colorado River system to produce flow conditions required by various life stages of the fishes. Impoundments and diversions have reduced peak discharges by 48 percent since 1942, while increasing base flows by 21 percent in some reaches. These depletions along with a number of other factors have resulted in such drastic reductions in the populations of the 7

Colorado pikeminnow, humpback chub, bonytail, and razorback sucker that the Service has listed these species as endangered and has implemented programs to prevent them from becoming extinct.

Critical habitat has been designated for the Colorado pikeminnow, humpback chub, bonytail, and razorback sucker within the 100-year floodplain in portions of their historic range (59 F.R 13374). Destruction or adverse modification of critical habitat is defined in 50 CFR 402.02 as a direct or indirect alteration that appreciably diminishes the value of critical habitat for both the survival and recovery of a listed species. In considering the biological basis for proposing critical habitat, the Service focused on the primary physical and biological elements that are essential to the conservation of the species without consideration of land or water ownership or management. The Service has identified water, physical habitat, and biological environment as the primary constituent elements. This includes a quantity of water of sufficient quality that is delivered to a specific location in accordance with a hydrologic regime that is required for the particular life stage for each species.

The Service has determined that **any** water removed from the Colorado River system, or any of surface or subsurface tributaries thereof, constitutes a depletion. The Service has consistently taken the position in its section 7 consultations that Federal agency actions resulting in water depletions to the Colorado River system are likely to jeopardize the continued existence of one or more of the fish species listed above and adversely modify or destroy designated critical habitat. Consequently, the Service has adopted a jeopardy standard for all such actions requiring consultation under Section 7(a)(2) of the Act. The jeopardy standard applies whether or not the water is removed from Federal or private lands.

Based on information provided in the DEIS, drilling a well requires an average of 3.2 acre-feet of water (page 2-20). Water used for drilling wells on the project area would be taken from wells that are considered recharge water to the Green River drainage (page 4-125). The depletion from drilling 300 or 900 wells for this project would total 960 or 2,880 acre-feet, respectively. Formal consultation will be necessary for these species.

The DEIS does not address the potential for, or degree of, development on private and State lands if development is not permitted on Federal lands. If oil and gas development on State and private lands within the project area would not occur, would not be feasible, or would occur to a lesser extent without Federal land development, the impacts to threatened and endangered species on the non-Federal lands must be considered an interrelated and interdependent effect. Under the Act, the Bureau is responsible for evaluating all potential impacts to listed species on private and State lands within the project area. The Bureau also should develop measures to avoid or minimize impacts to listed species on non-Federal lands that would occur as a direct or indirect result of the project. The Bureau should notify all lessees of their responsibilities to comply with Federal and other applicable regulations, regardless of land or mineral ownership (including the Endangered Species Act, the Migratory Bird Treaty Act, and the Bald and Golden Eagle Protection Act). If the Bureau, surface owners, and lessees agree, these private and State lands can be included in any section 7 consultation conducted for Federal lands for this project.

The information provided in Section 5.17 (page 5-27) which states ". . . the only protection provided to the species on non-Federal lands and minerals is through state game laws" is incorrect and should be deleted. Many Federal laws, such as the Act and the Migratory Bird Treaty Act, apply to all lands regardless of ownership.

We find the rationale used in determining that implementation of resource protection measures for some wildlife species and habitats will protect other wildlife resources, such as nesting mountain plovers and black-footed ferrets, to be flawed. Different species react to disturbance and habitat loss in different manners, and some species may be particularly sensitive to any habitat disruption. Additionally, the habitat protected with the resource protection measures may not be suitable for the nontarget species. For example, assuming well pad density restrictions in high quality sage grouse nesting habitat also will provide protection to nesting mountain plovers is erroneous (page 4-131). Sage grouse and mountain plovers have very different nesting requirements, and mountain plovers may react entirely differently than sage grouse to differing levels of well pad densities. While we understand that resource protection measures cover a large amount of the project area and may overlap into important habitats for listed or proposed species, they do not in themselves confer any direct protection to these species. Statements implying this protection will be provided through measures designed for other species need to re-evaluated in light of their actual value to listed or proposed species and corrected where necessary.

The peregrine falcon was delisted in August 1999. However, peregrine populations are being closely monitored to ensure that recovery is secure, and this species is still protected by the MBTA. Therefore, seasonal and distance buffers should still be applied, when appropriate, to this species.

The Yellowstone and Snake River cutthroat trout has been petitioned for listing under the Act. The Service has made a 90-day finding that the Bonneville cutthroat trout petition contains information to indicate that listing may be warranted. We are currently involved in a status review for this species. Potential impacts to these species as a result of project development are poorly addressed in the DEIS. Impacts to these species, such as depletions, sedimentation, and changes in water quality, should be thoroughly discussed in the FEIS. Cumulative impacts to these species also need to be addressed.

Proposed Species

For both the mountain plover and Canada lynx, we strongly encourage the Bureau to develop protective measures, with an assurance of implementation should either of these species be found within the project area. Although conferencing on species proposed for listing is only required when the proposed action is likely to jeopardize that species, development of protective measures through conferencing can minimize and expedite consultation requirements should the species be listed prior to project completion.

On page 4-125, the DEIS states that with surveys prior to surface disturbance, along with coordination with the Service if plovers are found, mountain plovers are not expected to be affected by any of the project alternatives. We do not agree with this assessment. In fact, this statement directly contradicts the statement made on page 4-129 and elsewhere in discussions of project impacts that ". . . the potential for significant short- and long-term impacts to nesting mountain plovers could be substantial if natural gas reserves coincide with mixed grasslands and desert shrub habitats and/or prairie dog colonies." In shrub-steppe and greasewood habitats, mountain plovers, if present, are typically associated with active prairie dog colonies. Observations made by Bureau personnel in the adjacent Jonah II project suggest prairie dog density and abundance are declining, possibly in response to increasing well density (K. Andrews, pers. comm.). We encourage the Bureau to consider impacts of potential reduction in prairie dog colonies on nesting mountain plovers, both within the project area and in the cumulative impacts analysis area. 14

Migratory Birds

The 825- and 1000-foot no surface occupancy stipulation for raptor and ferruginous hawk nests, respectively (page 2-15), were selected based on research which concluded that 90 percent of all nesting adult ferruginous hawks would not flush from nests if the disturbance was more than 250 meters from the nest (page 4-147). However, some nesting raptors will flush from their nest in response to disturbances at a greater distance than 250 meters. Therefore, implementation of this stipulation may not provide sufficient protection for all nesting raptors on the project area. Although we concurred with these distances on previous Federal projects, we were not consulted on raptors for this project, and we no longer believe these distances are sufficient to protect all active raptor nests. Therefore, we recommend these distances be increased. 15

Displacement from habitat and nest abandonment resulting from human disturbance should be added to the list of potential impacts to long-billed curlews, loggerhead shrikes, and other nesting birds in the project area (page 4-126). 16

Mortality of migratory birds caused by oil pits is a violation of the MBTA. If oil pits cannot be kept "reasonably free from surface accumulation of liquid hydrocarbons" as required in Onshore Oil and Gas Order No. 7, Section I (F)(8), birds and other wildlife should be physically excluded from these pits with nylon or wire netting. Any such installation of netting must be maintained if it is to remain effective. While other deterrents have been used to discourage birds and other wildlife from using oil pits, research has demonstrated that netting the ponds is the only effective method to exclude wildlife from these areas. The practice of "flagging" pits and other open storage facilities is ineffective in discouraging bird use of these facilities and should not be permitted as a single deterrent. Wildlife mitigation opportunity 16 (page 4-167) should be changed to state reserve pits *must* be covered by netting if they present a threat to migratory waterfowl (or any bird), particularly if oil-based muds are used. Operators also should be made aware of the bird mortality/oil pit problem and MBTA through the FEIS and through the 17

Application for Permit to Drill process via an information bulletin. Operators within the project area also should be advised of their obligation to comply with the MBTA, regardless of the surface or mineral ownership. 17

The Bureau should encourage use of the following options for the disposal of produced water.

- *Use Closed Containment Systems*--Closed containment systems require little or no maintenance, and the system can be moved to a new site when the well is shut in. Closed containment systems eliminate soil contamination and remediation expense.
- *Eliminate Pits or Keep Oil Off Open Pits or Ponds*--A fail-safe solution is to remove the pits or keep oil from entering the pits. Immediate clean up of oil spills into open pits is critical to prevent wildlife mortalities. 18
- *Use Effective and Proven Wildlife Deterrents or Exclusionary Devices*--Netting appears to be the most effective method of keeping birds from entering waste pits.

All hydrogen sulfide flare stacks should be equipped with antiperching devices to discourage birds from perching on these features.

To monitor potential impacts and to identify problem areas in need of immediate attention, the Bureau should require that all spills or other oil field activities resulting in injured or dead wildlife be reported to the nearest U.S. Fish and Wildlife Service Ecological Services law enforcement office. 19

Other Fish and Wildlife Resources

Potential impacts to wildlife, as described in the DEIS, appear to be based on the assumption that habitat loss is the only long-term effect on most species. This is reflected in many statements differentiating short- and long-term acreage of habitat loss in describing impacts to many different wildlife species. We do not disagree that habitat loss is important in describing impacts to wildlife. However, wildlife also may respond to project activities by avoiding the area as a result of increased activities around well sites, new roads, etc. In these situations, no amount of habitat restoration/reclamation will minimize the impacts until the development is completed and the entire project area reclaimed. We do not wish to imply that habitat reclamation should not occur while the project is ongoing. However, we believe the FEIS should acknowledge that many wildlife species are not ambivalent to project development and will respond to more than just direct habitat loss. Additionally, actual habitat losses described in the DEIS may differ from functional habitat losses, particularly if physically suitable habitat becomes unsuitable due to species sensitivities to disturbance. Habitat avoidance may be exacerbated if there are overlapping disturbances from differing components of the project development. Both direct and functional habitat losses need to be thoroughly discussed in the FEIS. 20

Wildlife monitoring recommendations listed in Section 4.18.5 (page 4-142) should be strengthened. To determine if areas are being used by wildlife species (e.g., mountain plovers, burrowing owls, bald eagles, and loggerhead shrikes), surveys *must*, not should, be conducted. Without these surveys, protective measures may not be implemented, therefore potentially resulting in noncompliance with the Act or the MBTA. 21

The Wyoming Game and Fish Department has informed us that the Pinedale Anticline project area is one of the most important areas in the State for sage grouse. Sage grouse are declining throughout their range, and concern for this species has led us to believe we will receive a listing petition for listing sage grouse pursuant to the Endangered Species Act in the near future. The cause of sage grouse decline is not known and may be a combination of several factors which affect habitat and reproductive abilities. However, anecdotal information from several sources in Wyoming, including the information presented on page 5-34 of the DEIS, suggests that sage grouse populations are negatively affected by the activities associated with oil and gas development, even when mitigative measures are implemented. 22

The Bureau has identified that impacts to wildlife would be considered significant if this development would contribute to causes that warrant an unlisted species to be proposed for listing under the Act (page 4-118). We encourage the Bureau to take all necessary measures allowable to protect sage grouse in the project area to ensure this project does not exacerbate factors contributing to sage grouse decline and thus give support to a listing petition.

"Squatting" by workers on Bureau lands (Wildlife Mitigation Opportunity 4, page 4-166) should be prohibited by the Bureau, not simply discouraged. 23

The DEIS does not clearly provide contingencies in the event that the lessee or future lessees abandon wells. Although bonding is required (43 CFR 3104 and 36 CFR 228 E), the minimum amount of $10,000 may not be adequate to plug abandoned wells or clean up and restore areas contaminated with hazardous materials or solid waste. Impacts to surface water and land quality and ultimately fish and wildlife resources can occur from abandoned oil and gas operations. According to the Interstate Oil and Gas Compact Commission (Produce or Plug - the dilemma over the Nation's idle oil and gas wells, December 1996), it costs an average of $5,400 to plug a well. We recognize that plugging costs can vary depending on well depth, formations, etc. However, we are concerned that current bonding requirements may not be adequate to cover plugging and other environmental cleanup costs. Contingency plans also should be developed in the event operators fail to comply with the Wyoming Bureau's Mitigation Guidelines (page 2-53, Appendix A) or if the mitigation is ineffective. 24

Wetlands

A section 404 permit from the U.S. Army Corps of Engineers is only issued for the filling of waters of the United States. Following Corps section 404 permit conditions for road and pipeline construction activities may not provide adequate protection for wetlands and other waters of the United States for which fill is not involved, as stated on page 4-115. 25

Given the potential for significant wetland impacts as a result of project implementation (page 4-115), mitigation with specific success criteria must be developed for this project. Mitigation plans should be incorporated in the FEIS, so that they can be evaluated for their effectiveness in restoring wetland function. The Service encourages the Bureau to implement compensatory mitigation (the Service recommends a 1.5:1 mitigation ratio) prior to project construction. 25

The wetland mitigation opportunities listed on page 4-117 should be requirements. For example, opportunity 3 should state that wetland spill response and clean up *must* be addressed in Spill Prevention, Counter Measure and Control Measure plans, not *should* be addressed, as it is currently written. Failure to require these simple mitigative measures will potentially result in significantly higher, avoidable wetland impacts. 26

Again, we wish to remind the Bureau that most Federal laws and regulations, including those protecting wetlands, apply regardless of surface or mineral ownership. The Bureau needs to remind lessees of their responsibilities for compliance with these laws and regulations off Federal lands. 27

Cumulative Impacts

The DEIS does not discuss changes in habitat quality as a result of project development and the impact of those changes on threatened, endangered, or proposed species or migratory birds. As we previously stated, we believe limiting the discussion to quantity of disturbance underestimates actual impacts to wildlife. Cumulative changes in habitat quality and quantity should be identified in the FEIS.

We are surprised that the Bureau has chosen to limit the cumulative impact analysis area for listed species and migratory birds to a 2-mile perimeter around the Pinedale and Jonah II project areas. Given the high mobility of most of these species, we believe a larger area may result in a more realistic assessment of the cumulative impacts. Indeed, the mobility of some of these species far exceeds that of big game wildlife or sage grouse for which cumulative impacts were assessed on a much larger scale. 28

Summary Comments

The Service recommends the Bureau prepare a biological assessment for this project, addressing the bald eagle, black-footed ferret, mountain plover, Canadian lynx, and impacts to Colorado River fish and their critical habitat. The current document does not contain sufficient information to allow us to concur that the project is not likely to adversely affect either the eagle or ferret. We recommend conferencing on the mountain plover and lynx, including development of protective measures to minimize impacts on these species and to expedite consultation requirements should the species be listed prior to project completion. Formal consultation on the Colorado River fish will be necessary. We do concur that the project is not likely to adversely affect the whooping crane.

The Service considers development of private and State lands within the project area to be an interrelated and interdependent effect of the proposed Federal action and, therefore, must be addressed by the Bureau. Regulations protecting threatened and endangered wildlife and migratory birds are applicable to the entire project area, regardless of surface or mineral ownership.

Buffer zones, including no surface occupancy stipulations, around active raptor nests should be evaluated on a project-specific basis to determine if they provide adequate protection to nesting birds. The Service recommends increasing the zones currently proposed. Oil pits or any open waste product facility associated with drilling should be netted to minimize mortality of migratory birds in these facilities. Wetland and wildlife mitigation "opportunities" should be strengthened, and some "opportunities" should be required. Contingencies should be developed in the event that the current lessees or future lessees abandon wells without performing adequate mitigation and reclamation, or in case mitigation is not effective. Finally, adaptive management practices and measure of impacts necessary to implement those practices need to be clearly defined.

Because of the interrelated and interdependent effects on State and private lands from oil and gas development on Federal lands and the additional protections for Federal trust wildlife species, wetlands, and other valuable wildlife habitat, the Service supports implementation of the Resource Protection Alternative on all lands and minerals if this project is developed. Minimization of direct, long-term habitat disturbances would be achieved by using pad drilling and constructing centralized production facilities. Therefore, we encourage the Bureau to implement these practices whenever possible.

We request a meeting with your agency at the earliest possible time to discuss and resolve our concerns. The meeting can be initiated by contacting the Field Supervisor, Ecological Services Field Office, 4000 Morrie Avenue, Cheyenne, Wyoming 82001 (307-772-2374, extension 34). We request the Bureau provide an advance copy of the FEIS to the Wyoming Field Office for their review.

If you have any questions, please contact Pat Deibert of the Wyoming Ecological Services Field Office at the above address or (307) 772-2374, extension 26.

LETTER 107

DEPARTMENT OF THE ARMY
CORPS OF ENGINEERS, OMAHA DISTRICT
215 NORTH 17TH STREET
OMAHA, NEBRASKA 68102-4978

REPLY TO ATTENTION OF

April 10, 2000

Wyoming Regulatory Office
2232 Dell Range Blvd., Suite 210
Cheyenne, Wyoming 82009-4942

Mr. Bill McMahan
U.S. Bureau of Land Management
Rock Springs Field Office
280 Highway 191 North
Rock Springs, Wyoming 82901

Dear Mr. McMahan:

This letter is in regard to the Draft Environmental Impact Statement (DEIS) for the Pinedale Anticline Oil and Gas Exploration and Development Project Sublette County, Wyoming. As a cooperating agency during preparation of the DEIS, our office participated in development of information necessary to assess potential effects on wetlands and other waters of the United States in the project area. Therefore, we are confident that information contained in the DEIS is both accurate and adequate for that purpose and we have no other comments on the DEIS. 1

We appreciated the opportunity to work with the U.S. Bureau of Land Management and the other federal and state agencies in development of the DEIS and we look forward to similar cooperative efforts in the future. We would also like to commend the consultant, PIC Technologies, Inc., for producing an outstanding document. If you have any questions, please contact Mr. Thomas Johnson at (307) 772-2300.

Sincerely,

Matthew A. Bilodeau

Matthew A. Bilodeau
Program Manager
Wyoming Regulatory Office

LETTER 5

JIM GERINGER
GOVERNOR

State Of Wyoming
Office of Federal Land Policy

ART REESE
DIRECTOR

April 26, 2000

Al Pierson, State Director
Bureau of Land Management
PO Box 1828
Cheyenne, WY 82003-1828

Dear Al:

In 1998 the Bureau of Land Management (BLM), recognizing that the State of Wyoming shared jurisdiction with the BLM, invited the State to participate as a Cooperating Agency (pursuant to 40 CFR 1501.6) during the National Environmental Policy Act (NEPA) process regarding the Pinedale Anticline Oil and Gas Exploration and Development Project. The State would like to thank the BLM for that invitation. This project has been an historic "first" for the State and BLM in many ways.

Aside from numerous "firsts" relative to the project itself, this is the first project on which the State has participated as a cooperating agency with the BLM from the very onset of the NEPA process. Our participation began as BLM was preparing to scope for this analysis, and has carried through the development of alternatives, analyses of impacts, writing of the draft environmental impact statement (EIS), and review of public comments. While the project is not yet complete, we understand our involvement will continue right up to the time BLM makes the decision.

5-16

This is the first cooperating agency experience in which State participation has gone beyond that specified by "the letter of the law." We were not restricted to participation during the scoping stage only, nor were we asked merely to respond to BLM's proposals or ideas at each stage. Instead, we have been included as an active partner on the interdisciplinary (ID) team with the BLM and the other federal cooperating agencies (US Forest Service and Army Corps of Engineers), providing input, articulating concerns, and helping shape the scoping process, the alternatives, the impact analyses, and the EIS.

This is a first particularly for Wyoming in that the State has agreed that individual State agency comments will not appear in the supplementary final EIS along with other public comments. This is because the State actually helped write and prepare the draft EIS. As such, we were fully involved in and commented at the scoping stage. We were fully involved in shaping the alternatives. We were fully involved in developing various impact analysis models and protocols, and in reviewing and interpreting analysis results. We reviewed and commented extensively on a preliminary version of the draft EIS. The State agreed to "sit at the table" with our cooperators and bring up all concerns and issues before the draft EIS was released for public review, so that the draft EIS would truly be a partnership effort between BLM, the other cooperators, and the State, and would reflect State concerns. Although the BLM has

1

Herschler Building 1W ◆ 122 W. 25th Street ◆ Cheyenne, Wyoming 82002-0060
Phone (307) 777-7331 ◆ Fax (307) 777-3524

incorporated in the final EIS errata any State agency comments regarding technical data omissions or corrections, we reasoned that any other State comments during the public review stage would be re-iterative of concerns already addressed in the draft EIS. While this is a break with tradition, it is, in fact, a positive break. The State has chosen to respond in good faith to BLM's good faith in including us so fully throughout the process. State agency scoping and draft EIS comments are public information and therefore are available upon request.

Bill McMahan, Rock Springs Field Office, is to be commended for his outstanding leadership on this project. Under his tutelage, the ID team has made an exemplary effort to identify and address the concerns about this project from all federal, State, and local agencies, from industry, and from public and private interests. He supported the ID team's decision to use a new and more conservative air quality dispersion model and impact analysis protocol, despite the controversy surrounding that decision. He encouraged development and use of more-refined wildlife habitat impact models, has the Transportation Planning committee "up and running," and has recommended that BLM establish an Adaptive Environmental Management Planning committee.

The combination of Bill's leadership and innovative thinking, the coordination abilities and field office leadership of Prill Mecham (Pinedale Field Office), the extensive gas field and NEPA regulation knowledge and technical capabilities of the consultant who conducted the impact analyses and penned the EIS (PIC Technologies, Inc.), and the extensive involvement of the State and other cooperating agencies, has produced such sound analyses and such an excellent document that even the Environmental Protection Agency could find no fault - another first. Congratulations to everyone!

1

Again, I'd like to thank BLM for inviting the State's participation and commend Bill McMahan and the BLM for allowing cooperating agency participation beyond the "letter of the law." Though the decision has yet to be made, I believe this partnership has already illustrated that close coordination with non-federal partners within the NEPA process not only works but is beneficial for all concerned and for the environment. This project has shown that the State of Wyoming and federal agencies can work together, sharing jurisdiction, sharing information, partnering during alternative development and impact analyses, all the while respecting each other's roles, missions, and primacies. I look forward to the State participating in similar cooperative efforts on other BLM activities in Wyoming.

Sincerely,

Art Reese

Art Reese
Director

JG:ar/ck
cc: Governor Geringer
Bill McMahan, Rock Springs Field Office
Aaron Clark, PIC Technologies

LETTER 6

February 2, 2000

Mr. Bill McMahan
Bureau of Land Management
280 Highway 191 North
Rock Springs, WY 81901

Dear Mr. McMahan:

I have limited time to study the Pinedale Anticline DEIS, but I feel that a good effort has been put forth and I think the key concerns have been adequately addressed.

Access roads are vital to the developers and, from meetings I've attended, I believe that problem is being handled in a cooperative manner.

Wildlife and human activities have long intermingled in our area. And I do not believe the gas development as proposed will adversely affect the habitat. Everything cycles!

Our air and water are of concern to all of us – and continued monitoring should be carried on – but I can see much effort and expense already expended by developers to protect those assets.

The economic value of the anticline development must be considered, and the taxes and jobs generated by the development right here in Sublette County and the Town of Pinedale are impressive.

Also extraction of a cleaner burning fuel can be of benefit to the entire country.

I commend you on the Pinedale Anticline Natural Gas Exploration and Development Project Draft Environmental Impact Statement.

Sincerely,
Rose Skinner, Mayor
Town of Pinedale

1

5-17

LETTER 7

GENE R. GEORGE & ASSOCIATES, Inc.
350 West "A" Street, Suite 205
P. O. Box 2775, Casper, Wyoming 82602
307 265-9199, Fax: 307 473-7138

Petroleum Geology
Hydrogeology
Regulatory Permitting and Compliance

February 2, 2000

Bureau of Land Management
Bill McMahan, Project Manager
280 Highway 191 North
Rock Springs, WY 82901

Re: Comments DEIS Pinedale Anticline Natural Gas Exploration and Development Project.

Dear Bill:

The following comments are on behalf of Yates Petroleum Corporation as operators of leases in the Pinedale Anticline Project Area (PAPA). Yates is an industry participant in this project and is financially supporting the EIS. However, Yates does not agree with the alternatives submitted by the consultant and approved by BLM. They are misleading to the public. Yates has repeatedly stated that the standard stipulations do protect the resources and very few additional stipulations are required to meet BLM or NEPA obligations. The second alternative title, Resource Protection Alternative suggests that the standard stipulations do not protect resources. Even though the following explanation exists in the text (page 1-4): "It is important to recognize that the environmental protection offered by this alternative (Standard Stipulations) is extensive."... "As such the alternative (Standard Stipulations) incorporates a myriad of measures which have proven to be very effective in reduction of the environmental impacts from oil and gas development.", it is unreasonable to expect the public to find that single paragraph as significant to their analysis of the document. Yates would urge the adoption of the Standard Stipulations Alternative with very few modifications.

1

2

The following comments are specific to the text references cited:

Executive Summary -1, 2nd paragraph, first column, "No technically feasible level of mitigation can be applied in these areas to minimize the severity of impacts to less than significant." This statement is based on the results of modeling for mule deer and sage grouse that has not been used previously in this area. Many assumptions in the model protocol have not been peer-reviewed nor have the model results been tested against actual monitored results. For other models such as CalPuff used for air quality, the various stakeholders have the opportunity to review the protocol and the analysis methods. The modeling also assumes permanent loss or decrease in reproduction to the species from any displacement rather than recovery after the drilling phase. Please qualify this inflammatory statement by stating that it is based on modeling that has not been peer- or stakeholder-reviewed and list the other assumptions used to make this statement.

3

4

5

3

Executive Summary – 3, second column, 4th paragraph, "Sedimentation in the New Fork River may already be a problem." The implication is that oil and gas development is responsible for this unsubstantiated statement. Please clarify to whom the blame for the sedimentation problem belongs. 6

Executive Summary - 4, first column, last paragraph, "Mountain" and "implementation" do not require hyphens.

Executive Summary - 5, first column last paragraph continuing on to the second column, The reference to the Adaptive Environmental Management Plan states that it "would be adopted for this project." It is imperative to correct this statement by stating that the AEM plan is only a suggestion by the EPA (as later done in the text). NEPA does not require such a plan. Please refer to the section of this letter dealing with the AEM plan. 7

Page 1-5, 1st column, 2nd paragraph, This is the first time that it is discussed that mitigations would be applied to all lands. Yates objects to the analysis of this alternative in that it misleads the public by allowing them to believe that some agency could enforce this alternative. A statement should be made that the State of Wyoming specifically turned down BLM's request that federal stipulations be extended to state and private lands. 8 9

Page 2-35, Table 2-8, Number of rigs operating under "Resource Protection" alternative, The limit of 5 rigs is not possible or reasonable. How will BLM decide who gets to drill? Yates' acreage is south of the New Fork River but still objects to any artificial level of rigs in the PAPA. BLM can demand protection wells for drainage from fee or state wells and would not allow operators to drill to protect their correlative rights by drainage from other federal wells. This single arbitrary and capricious limit makes it impossible for BLM to adopt this alternative. An alternative should be analyzed with an estimate of how many wells could be drilled a year with the avoidance periods now required to show the public what a real situation would be like. 10 11

Sensitive Viewshed SRMZ, Limiting the number of pads violates VRM standards. The standards only describe the visual impacts and how the facility is to fit into the viewshed. If all16 wells can be placed in a VRM2, by landscaping etc., then the objective of VRM classes is achieved. BLM is appeasing the public desire to limit wells as a perceived method of reducing visual impacts without following their own regulations about visual resource management. The VRM Class II areas should be analyzed and the possible mitigations should be listed. All other analysis of SRMZs that lie outside of the VRM Class II areas should be labeled as unenforceable by the BLM. 12 13

Page 2-36, Lander Trail, the NPS EIS covering the Oregon and related trails does not give the Lander Trail a designation of "high-potential" sites or segments. In fact, the Lander Road is not even shown on the NPS EIS maps. The Green River Resource Area RMP uses the ¼ mile avoidance as a safeguard to the integrity of the trail. The limit of well numbers within certain distances is arbitrary and does correspond to actual 14 15

disturbance. Yes, a person five-foot eight inches tall might see facilities but no actual data is presented that this would disturb any "experience". This limit is based on an assumed human disturbance. Extending visual impact restrictions to 3 miles would cause significant increases in drilling costs for directional wells and would limit resource recovery and would be grounds for a federal "takings". Figure 3-11, Page 3-34, shows that for the Yates Lease in Section 26 T31N, R108W, only two locations would be possible. This would require Yates to directionally drill up to ¾ mile to reach the southern parts of the section. To date, this distance would not be practical or economic, particularly in an "off axis" position. Motorized travel is allowed on the trail segment. How can anyone get the "pioneer experience" from a 4-wheel drive or an ATV? Yates objects to any restriction beyond those in the RMPS (the ¼ mile avoidance). This analysis of special visual avoidance areas beyond the RMP ¼ mile avoidance should be listed as unenforceable by the BLM. 16 17 18 19 20

Page 2-38, Sage Grouse Leks, Yates Petroleum Corporation finds the 10 dBA noise increase restriction arbitrary and totally unnecessary. The language unique to this Alternative is as follows: "Noise from projects on Federal lands and minerals would be managed near leks while they are actively attended (approximately March 1 to May 15) during the hours from midnight to 9 a.m. so that no more than a 10 dBA increase in background noise occurs at the lek." Page 4-147 explains that the male sage grouse mating display involves an acoustic signal coupled with visual displays (Eng et at, 1979; Vehrencamp and Bradbury, 1989; Gibson and Bradbury, 1985; Gibson, 1989, 1992, 1996; Gratson, 1993) so that **constant** noise could interfere with females attraction to male's displays.

The rest of the text on page 4-147 lists the various noise level versus distance for a car or pickup; heavy trucks, dozers and scrappers; drilling rigs and a 26,000 hp compressor station. First, cars, pickups, heavy trucks, dozers and scrappers are **not constant** noises. Page 4-31, 2nd column, Impacts from Noise, contains a list of distances in feet from rigs versus noise levels. At 1000 feet, the level is 47.5 dBA which is less than the 49 dBA proposed limit. As the distance goes to 1320 (1/4 mile, the standard avoidance for leks) the level would be less than 47.4 dBA. Table 4-33 on page 4-76 shows noise levels versus distances for rigs and compressors. The rig data illustrates that the ¼ mile avoidance is sufficient. The compressor data assumes that 26,000 hp is used at one site which is very unlikely to occur. Although the noise level for heavy trucks, dozers and scrappers exceed the maximum 49 dBA suggested limit, these sources are not constant and would only overlap the time restriction from 6 a.m. to 9 a.m. All other listed noise sources would be at or below the 49 dBA suggested limit at ¼ mile. 21 22

The discussion in the technical report explains how the 10 dBA over EPA's "Farm in Valley" 39 dBA relates to the FERC Leq of 49 dBA for rigs and compressors but fails to relate the level to sage grouse. The report states that neither Sublette County nor the State have noise limits and that there are no standards of noise protection for wildlife. It just says that an increase of 10 dBA above background is likely to be acceptable. Therefore, the 10 dBA over background limit is arbitrary and capricious. No additional 23 24

monitoring or restrictions are necessary according to the literature. This 10 dBA limit above the 39 dBA background should not be selected in the ROD as a necessary mitigation. Page 5-19 states "no cumulative noise impacts are anticipated." A statement should be made that summarizes that the impacts of constant noise on leks as fully mitigated by the current ¼ mile facility and activity avoidance RMP requirements. 24 25

Page 2-39, Sage Grouse Nesting Habitat, Resource Protection Alternative, The limit on the number of well pads is arbitrary and is not related to any study or sensitivity analysis. A ¼ mile avoidance area protects leks on a permanent basis and the nesting area is now avoided during the nesting period, restricting the number of well pads per section during non-nesting periods is unnecessary and arbitrary. 26

Page 2-39, Blue Rim Soils and Paleontology, Please separate Paleontology and show that even with the Standard Stipulations, paleontological resources would be protected by avoidance and/or expert analysis. The limiting of well pads to 4 per section in the RPA is excessive, arbitrary and not related to soils or to other mitigation measures. 27

Page 2-40, Cultural Resources, The programmatic agreement is attached as Appendix I. It is the first time the operators have seen the agreement. Yates is willing to negotiate such an agreement during this EIS process or afterward. A programmatic agreement for cultural resources is not required by NEPA. Please clarify that a programmatic agreement should be established with the cooperation of the operators. 28

5-19

Page 2-41, Table 2-9 and 2-10 both show that the total short-term disturbance of the Standard Stipulations Alternative is 9,604 acres for the 700 well level of development and 7,363 acres for the 500 well level of development. When compared to the total PAPA area that includes 197,345 acres (page 3-2, Table 3-1), this represents 4.9% and 3.7% of the PAPA, respectively. The long-term disturbance is 1,914 acres (700 wells) and 1,382 acres (500 wells) which represents 0.97% and 0.70% of the total PAPA, respectively. A reference should be made to this analysis so that the public gets the true perspective of the impacts under the SSA. 29

Page 2-43, 1st column, third paragraph, This section discussed the "obvious alternative" logic of presenting the restricted number of rigs under the RPA. Even though the section states that "BLM recognizes the inherent difficulty in determining which operator would be allowed to drill when.", the document states that "Never-the-less, as shown in Chapter 4 and as was suggested during public scoping and the workshops, many of the impacts could be significantly reduced by the slowing of the pace of development." A review of Chapter 4, shows a statement on Page 4-3 1st column, 1st paragraph, that the RPA "...evaluates the benefits of slower paced development by limiting the number of rigs *annually* (emphasis mine) in the project area to five." "Annually suggests that only 5 rigs would be allowed per year rather than at any one time. Is this the intent of this statement? Table 4-1 on page 4-6 shows a summary of public responses on Pace and Level of Development. Two statements ask for incremental development and small- 30 31

scale test basis. The Table responds that "This recommendation is contradictory to rights granted the operators in their Federal leases and is not practicable or possible where multiple leases are involved. See Section 2.7.3." The logic is convoluted. Section 2.7.3 refers to the RPA extended to non-federal lands that clearly states that BLM has no authority to do so. In summary, the document uses the "obvious alternative" argument to support a limited number of rigs in the PAPA and refers to Chapter 4 and public comments as support. The support states that BLM has no authority to limit the number of rigs on all lands and that the limit is contradictory to the lease terms. 31

Drilling is already greatly restricted by the current lease and RMP stipulations. The stipulations include no drilling from February 1 to June 30 for sage grouse nesting within 2 miles of a lek, 1 mile avoidance around raptor nests from February 1 to July 31 and the winter crucial range restrictions of no drilling or activity after November 15 until April 30. Also, there is a frozen ground limit on construction. These current restrictions would limit the drilling time essentially to July 1 to November 15 (4.5 months) where these wildlife considerations occur. It should be noted in the text that this confined timeframe creates an artificial demand for drilling rigs and drives the price of drilling costs up approximately 20% over drilling costs on non-federal lands in the middle of the year. If only 5 rigs , either for drilling or for completion, (it takes 30 days to drill with a drilling rig and 45 days to complete with a completion rig) are allowed from July 1 to November 15, only 8 to 10 wells per year could be drilled. If a producing well offsets another federal lease, it could be a year or more before an operator could protect their correlative rights when the BLM decides that they will allow that operator to use a rig. If depletion takes place, a federal "taking" situation will occur. 32 33

Page 2-47, Tables 2-11 and 2-12 show the disturbance of 700 wells and 500 wells under the RPA respectively. The total PAPA area is 197,345 acres. The short- and long-term disturbance for the 700 well level of development is 7,437 acres and 1,340 acres, which is 3.74% and 0.68% of the total PAPA, respectively. The short- and long-term disturbance for the 500 well level of development is 6,265 acres and 988 acres, which is 3.2% and 0.5% of the total PAPA, respectively. Please compare the following disturbance for the SSA and the RPA:

	500ST Acres	% of Total	500LT Acres	% of Total	700ST Acres	% of Total	700LT Acres	% of Total
SSA	7,363	3.7	1,382	0.7	9,064	4.9	1,914	0.97
RPA	6,265	3.2	998	0.5	7,437	3.7	1,340	0.68
Diff.	1,098	0.5	384	0.2	1,627	1.2	574	0.29

(ST = short-term, LT = long-term)

The conclusion is that by restricting the number of rigs, and allowing only 4 pads per section in the sensitive resource management zones, the net gain is one percent or less disturbance in all scenarios. This gain of disturbed acres up to 1.2% for short-term disturbance is offset by the $7.2 million to $9.6 million additional cost spent per section 34

by the operators at $600,000 to $800,000 per directional well. It is recommended that a cost-benefit analysis be performed to justify the additional cost of the RPA. 34

Page 2-54, Table 2-15, SSA, average of 8 rigs working year-round. Much of the area is restricted from between Nov 15 and July 31 for sage grouse, raptors and winter crucial winter range for big game. Under the SSA it would be difficult to find areas where rigs could work year-round (see Figure 3-22 Sage Grouse Leks and Nesting Habitat, page 3-79). Please adjust the drilling figure throughout the table to reflect realistic numbers. Also adjust the trip and people in the table. 35

Page 2-54, Table 2-15, 60 to 90 wells per year under the SSA. To get 90 wells per year would require that every rig would drill one well per month which is very unlikely because of rig moves, muddy ground and wildlife restrictions. Please adjust all numbers to realistic numbers considering the wildlife and weather restrictions. 36

Page 2-56, Table 2-15, Lander Trail (referred to as the Lander Road in the NPS EIS) impacts are over-stated. How can the "trail setting" be maintained if motorized traffic is allowed on the trail? The NPS EIS recommends only the ¼ mile avoidance stipulation for protection of the "non-significant" portion of the Oregon-California Trail system. 37 38

Page 2-58, Table 2-15, Noxious weeds under the SSA. Appendix A, page A-15, requirement #7, under Reclamation, requires control of noxious weeds. Please modify this section of the table to show that noxious weeds will be controlled under the SSA. 39

Page 3-53, Group 4, Upland Soils. This section includes the Blue Rim area. There are 101,126 soil types in this group. The main characteristic is that they "have a high runoff rate and erosion potential". Pages A-13 and A-14 of Appendix A deal with soils. Erosion reduction of highly erodible soils is the subject of stipulation #7, #10, and #11 which suggests that current stipulations are adequate to deal with these soils and thus no special stipulations are necessary as suggested by the RPA. 40

Page 4-3, 1st column, 1st paragraph, line 11. The position of the word "annually" in the sentence suggests that only 5 rigs per year would be allowed under the RPA. 41

Page 4-4, 1st column, paragraph 4.1.3. The quote of 40 CFR 1505.2 is incorrect. The complete sentence in 40 CFR 1505.2 (c) is as follows: "A monitoring and enforcement program shall (*not must*) be adopted and summarized *where applicable for any mitigation*." (Emphasis is mine). The following quote from the BLM NEPA Handbook H-1790-1 VI-3 states: "It is not, however, always necessary or feasible to monitor every action". Near the end of the paragraph, a statement is made that monitoring programs would be designed *using the process* defined in the AEM plan in appendix F. (Emphasis is mine). Page 2-52 states that "Appendix F of this EIS contains a framework for an Adaptive Environmental Management Plan that *would* be adopted for this project." (Emphasis is mine). These statements are contradictory. The operators will negotiate the monitoring programs with the BLM and will negotiate the 42 43 44

responsibilities for such programs. Neither NEPA nor BLM CFRs dictates the specific style or process for a plan. The Transportation Plan (Appendix B) and a Wildlife Protection and Monitoring Plan such as in Continental Divide/Wamsutter II EIS covers the issues raised in this section. The standard stipulations for reclamation and soils fully protect the sensitive resource areas. The State of Wyoming controls water quality. All discharges are regulated by NPDES permits and storm water runoff plans are required for any construction larger that 5 acres. There are no significant impacts to air quality and thus additional monitoring by the operators or the BLM is not required. Please state that additional plans may not be needed. 44

Page 4-15, Section 4.4.3.1, This section also needs an analysis to account for the loss of revenues (discounting by the time value of money, RMG used 15%) caused by the fewer wells being drilled under the RPA. The total income may be the same but the time value of money (discounting) will reduce the effectiveness of the income. With directional wells or pad drilling and the restriction of 4 pads per section in some SRMZs, the reduced resource recovery and corresponding loss of revenues needs to be analyzed. A cost/benefit analysis of the added drilling costs versus the amount of disturbed acreage will show an excessively high cost. A cost/benefit analysis should be included. 45

Page 4-77, 1st column, 2nd paragraph, states that "...compressor facilities located closer than 2500 feet to a sage grouse lek could significantly affect sage grouse lek use." This would only occur when the station is 26,000 hp. It is not likely that a single 26,000-hp station would ever be built. If three separate stations or two separate stations were built at different locations, the ¼ mile avoidance area for leks would protect the leks for any noise impacts. Up to 5 compressor sites were listed in Chapter 2. A statement making this clarification should be included. 46

Page 4-78, Air and Noise Mitigation Opportunity 5, This suggestion to install a 1g/hp-hr engine even when no impacts are shown is an example of reaching outside of authority limits and of suggesting remedies for problems that do not exist. Please include the following statement: "WDEQ sets the engine emission standards through BACT analysis." 47

Page 4-78, Air and Noise Mitigation Opportunity 7, This assumes that a 26,000-hp compressor station is likely. Please see the comment for page 4-77. Please clarify this assumption. 48

Page 4-84, Groundwater Mitigation Opportunity 3, Operators always do cement behind casing in water zones used for any permitted purpose. The WOGCC and the BLM require cementing practices of this type. 49

Page 4-84, Groundwater Mitigation Opportunity 4, The Wyoming State Engineer's Office permits wells and their uses. Setting an arbitrary depth of 500 feet is silly if no relationship to the location and local geology is made. 50

Page 4-84, 4.13.2.4 Monitoring Recommendations, The first sentence is nonsense. What is evaluating source options and the relevance of specific conductance? Ultra is currently taking care of all of the monitoring required for any ground water impacts on the Mesa. An area-wide monitoring program is unreasonable without correlation of aquifers and modeling that will show regional impacts to the wells now producing in the PAPA. This is a solution to a problem that does not exit. 51

Page 4-86, BLM Erosion Control, Revegetation and Restoration Plan, This paragraph is misleading. This ERRP is required at the APD EA level. The reference to the Appendix A is not clear. What does 4 mean after Appendix A? 52 The reference to a 15% slope should be 25% if referring to the list on page A-2 of Appendix A. 53

Page 4-88, Spill Response Practices, 40 CRF Part 112 states that a SPCC plan is required if you store more than 660 gallons of a hazardous substance and there is the potential to spill or discharge upon or into navigable waters of the US. Please add "where applicable" at the end of the sentence with the footnote 4. 54

Page 4-89, Standard Stipulations Alternative, Second sentence from the end of the paragraph. Where is the substantiation for this statement? Operators do file for, get and implement SWPPPs. Controls are not required for disturbances less than 5 acres because the EPA has determined that the potential discharges from these small areas are not significant. Is this the personal opinion of the contractor that the BLM and the State of Wyoming are not enforcing these requirements in the PAPA? Abernathy, 1998 suggests that in critical cases, the SWPPP must be submitted to the WDEQ 30 days in advance of construction and that the WDEQ would conduct an onsite. The BLM also requires that a NPDES storm water runoff permit is acquired from WDEQ for disturbances that BLM calculates to exceed 5 acres as an APD approval stipulation (George, 2000). The solution suggested here is to have BLM enforce a more stringent program even after it is stated that the BLM does not enforce their current programs. 55

Page 4-120, first Column, last paragraph and second column, second paragraph, These paragraphs discuss recreational shooting of prairie dogs reducing the populations by 35 to 69% and that they can recover in one year's time from that shooting. It would seem unlikely that drilling rigs or production facilities could bother prairie dogs. Yates, however, has no objection to following all criteria set forth by the USFWS for protection of black-footed ferrets.

Page 4-126, second column last paragraph, The reference to a 26,000 hp compressor is misleading in that no operator is likely to have a single station this large. See the previous comments concerning compressors and noise. 56

Page 4-141, Threatened/Endangered Species Mitigation Opportunity 3, The statement should be that operators should adopt a policy of no dogs on location unless restrained. 57

Page 4-148, Compression, The reference to a 26,000 hp compressor is misleading in that no operator is likely to have a single station this large. See the previous comments concerning compressors and noise. 58

Page 4-157, Sage Grouse, second paragraph, first column, The analysis provided throughout this document proves that the ¼ mile avoidance stipulation is sufficient for maintaining the maximum noise level at 49 dBA from constant sources for leks. 59

Page 4-166, Wildlife Mitigation Opportunity 5, Dogs unrestrained would be prohibited. 60

Page 4-167, Wildlife Mitigation Opportunity 13, If a pad or road is prohibited within 8 miles of a lek to protect nesting habitat, where could a single well be drilled in the PAPA? 61

Page 4-167, Wildlife Mitigation Opportunity 16, Migratory waterfowl in reserve pits is not a problem. These temporary pits cannot be netted while drilling operations are active. The reserve pit does not contain hazardous substances. The pits are fenced while drying takes place after drilling. 62

Page 4-167, 4.19.5, Monitoring Requirements, first paragraph, A Wildlife Monitoring and Protection Plan negotiated between the BLM and the Operators will cover the responsibilities and costs of the monitoring activities. There is no need for an AEM plan. The operators pay royalties and taxes that should be sufficient to pay all costs. The BLM should request the proper amount for a budget from Congress to cover any additional monitoring expenses beyond these normal plans. 63

Sincerely,

Gene R. George, Wyoming Regulatory Issues Agent for Yates Petroleum Corporation

Copy: Janet Richardson, Lisa Norton Yates Petroleum Corporation

LETTER 8

ANSCHUTZ
WYOMING CORPORATION
555 Seventeenth Street I Suite 2400 I Denver, Colorado 80202-3987 I Telephone 303/298-1000 I Fax 303/298-8881

February 3, 2000 By Facsimile 307-352-0329

Bill McMahan
Bureau of Land Management
280 Highway 191 North
Rock Springs, WY 82901

Re: Comments on Pinedale Anticline DEIS

Dear Mr. McMahan:

Anschutz Wyoming Corporation would like to thank you for the opportunity to comment on the Pinedale Draft EIS. We are aware that the BLM attempts to balance the interests of multiple parties in preparing this EIS. Nevertheless, we think that a number of the Resource Protection Alternative Mitigation Requirements are arbitrary and capricious, are often unworkable as written, and will effectively result in a taking of producers' leasehold interests. We strongly encourage you to utilize Standard Stipulations Mitigation Alternatives in all instances for the Pinedale EIS. 1

We previously forwarded a letter dated September 28, 1999 that included Anschutz Wyoming Corporation comments on the Preliminary Draft EIS. Our comments in that letter addressed numerical rig restrictions, central facilities, pad/directional drilling, sensitive viewshed restrictions and cultural/Native American sites. All comments noted in the earlier letter still apply to the Draft EIS; please consider these comments while preparing the Final EIS. Enclosed is a copy of the September 28, 1999 letter for your convenience. 2

• Summary

We would like to address three primary topics for your consideration: Economic Analysis, No Surface Occupancy and Directional Drilling, and Seasonal and Rig Restrictions. Based on our analysis, we conclude that the Resource Protection Alternative, if implemented, will result in an economic taking of portions of operators' Federal leasehold. We strongly encourage the BLM to implement the Standard Stipulations Mitigation Alternative. We also recommend the BLM implement an overarching rule, that absent an economically viable location to drill a well, restrictions be waived in order to provide an operator an economically feasible location to drill. 1 3

• Economic Analysis

The Draft EIS contains an Engineering and Geological Report summarizing the economics of drilling in the Pinedale Anticline under varying rate, reserve, cost and price scenarios. While we agree with the general conclusions, we think the assumptions are generous. We have re-run these economic analyses with assumptions that more closely match our experience in Pinedale.

Attachment No. 1 summarizes the economic assumptions used to prepare economic analyses. Anschutz' assumptions use steeper declines than those in the DEIS. The declines we have used closely match the declines seen in the Mesa 16-5, Stewart Point 3-28, and Mesa 3-22d. Drilling costs are higher, and the extra costs incurred in drilling a deviated well are larger. These assumptions are based on the drilling results of Anschutz, Questar and Ultra over the last few years. The DEIS analysis does not include any costs for either water disposal or costs associated with gas transportation, such as fees for gathering, shrinkage and fuel. Again, the assumptions reflect current operating conditions in Pinedale. 4

Attachment 2 summarizes Pinedale economics with plots of recoverable reserves vs. present value at a 15% discount rate, assuming a SW Wyoming gas price of $1.50/MMBTU. Attachments 3 and 4 plot the same data, with SW Wyoming gas prices of $2.00/MMBTU and $2.50/MMBTU, respectively. Many of the conclusions noted below are based on these economics.

• No Surface Occupancy and Mandated Directional Drilling

The Draft EIS contains Figure 2-5, which summarizes some, but not all, the surface restrictions to which operators may be subjected. The technical report also provides a tabular listing of the status of each 40 acre drilling location. Both apparently include surface restrictions due to residence buffers, 25% slopes, stream buffers, 100 year floodplain buffers, raptor nest buffers, Lander Trail buffers, intermittent stream buffers, sage grouse lek buffers, and highway buffers. Other restrictions, including cultural and Native American sites, the Mesa Breaks, VRM II zones, and unmapped or undiscovered raptor or sage grouse sites, could add additional sites upon which no surface occupancy rules would preclude operators from drilling wells or building roads to access wells. In addition, topographic features may preclude surface occupancy. When factoring all surface occupancy restrictions, it becomes clear that operators may have great difficulty locating an unrestricted drilling site in some areas.

Anschutz Wyoming Corporation's federal leasehold in the Pinedale area is within T32N-R109W. A map of this area (Attachment No. 5) has been prepared which overlays proposed VRM and Mesa Breaks restrictions over Figure 2-5. This map has been analyzed with respect to Anschutz' acreage. We can draw the following conclusions from our detailed analysis of this map: 5

- 52% of Anschutz operated 40 acre spacing units (drill sites) have some no surface occupancy (NSO) provisions.
- 17% of Anschutz' drill sites must be moved more than 600', which is the criteria for site elimination in the technical report tabular listing. A similar analysis of the technical report (which uses only restrictions shown on Figure 2-5) shows that 6% of Anschutz' drill sites will be eliminated.
- 37% of Anschutz drill sites will be moved more than 200', above which directional drilling work will likely be necessary to hit a legal bottomhole target. Drilling costs will rise, which will limit the number of economic wells drilled.
- All figures noted above are best case scenarios; impacts due to unknown cultural sites (the BLM has refused to make a map of cultural sites available, despite requests to do so), future raptor and sage grouse nests, and topographic obstructions can only make the impact on drilling operations more severe.

5

Under the Resource Protection Alternative, the BLM is considering either limiting the number of surface locations to 4 per section or requiring centralized facilities. Centralized facilities may or may not be a viable alternative; if not, 12 wells per section would have to be directionally drilled. Taken together with the large number of surface occupancy restrictions, the majority of wells drilled on the Pinedale Anticline may be deviated wells.

The economic impact on Anschutz due to no surface occupancy restrictions and directional drilling requirements will be significant, if the Resource Protection Alternative is implemented. The drilling experience of Ultra, Questar and Anschutz on the north end of the Pinedale Anticline indicates that directional wells will be both more costly and more likely to suffer mechanical problems. The costs over 10 wells on the northern part of the Pinedale Anticline to drill and case a directional well range from $0.5-0.75 MM more than the cost of drilling and casing a straight hole. These extra costs will necessitate larger reserves to economically exploit the resource. For example, given a SW Wyoming Gas Price of $2.00/MMBTU, an operator requiring a 15% return on capital would need to find about 3.3 BCF when drilling a straight hole, while 4.3 BCF would be needed to economically justify the cost of a deviated well (see Attachment No. 3). In areas where an operator expects to find between 3.3 and 4.3 BCF, the requirement to drill a well directionally would preclude an operator from economically drilling a well, and an economic taking would result. The potential for such an occurrence may be widespread. The following table shows the impact from directional drilling for Anschutz' 253 forty acre locations alone in T32N-R109W, assuming half of Anschutz' acreage is ultimately prospective, and 20% of the acreage falls in the 3.3 to 4.3 BCF range:

6

Directional Locations	Uneconomic Locations	Lost Reserves BCF	Lost Royalty $MM	Lost Taxes $MM	Directional Locations Required	Lost Profits $MM
75%	19	72	18	9	95	52
50%	13	48	12	6	63	35
25%	6	24	6	3	32	17

6

As previously noted, 75% of locations (12 of 16 per section) may require directional drilling under resource protection stipulations if central facilities can't be utilized. And even if central facilities are employed, at least 37% of Anschutz' locations will be impacted by surface occupancy restrictions. In either case, the losses to Anschutz' as well as to the Federal Government (lost royalties) and the State of Wyoming (taxes) are sizeable. Other operators would be similarly impacted. The result of mandated directional drilling, whether due to surface occupancy restrictions or to drilling pad restrictions, would be an economic taking of operators' leasehold.

7

In addition, severe problems will occur more frequently due to directional drilling requirements. For example, casing could not be run to bottom on Ultra's Mesa 3-22d, a directional well in Section 22-T32N-R109W. Reserves in the lower part of this well could not be completed or recovered because of problems stemming from directional drilling. Such losses could be expected as an outcome of mandated directional drilling.

8

In order to allow operators to economically develop their Federal leasehold, the BLM must do their part to minimize surface restrictions and directional drilling requirements. An overarching rule that allows the BLM to waive surface restrictions, as needed, to provide operators an economically viable location to drill would alleviate many potential takings issues and should be made a part of the EIS. We would also strongly advocate that no pad limits be made a part of the EIS.

9

Again, please note that the BLM has been unwilling to provide operators a map of the area cultural sites to date. We find it difficult and unfair to comment on possible restrictions which are known to the BLM but which are not made available to the operators.

10

• Seasonal and Rig Restrictions

Seasonal restrictions will be placed on operators due to big game restrictions, sage grouse nesting restrictions, and raptor restrictions. The following table summarizes Anschutz' position in T32N-R109W with respect to seasonal restrictions:

	Locations	%	Restricted Days
No Stipulations	0	0.0%	0
Big Game Only	2	0.8%	166
Sage Grouse Only	7	2.8%	121
Big Game & Sage Gr.	127	50.2%	227
Big Game & Raptor	2	0.8%	258
Sage Gr. & Raptor	19	7.5%	180
All Stipulations	96	37.9%	258
	253	100%	232 avg. days
			7.6 avg. months

On average, Anschutz will have only 4.4 months per year in which to conduct drilling and completion operations. Wells take from 30-60 days for a vertical well, and up to 90 days for a deviated well. One drilling rig could therefore drill between 1-3 wells per year. Completions take up to 45 days to finish; many wells could not be completed and production initiated until the year following drilling. 11

The Resource Protection Alternative would mandate only 5 rigs operating on the PAPA, only 2 of which could be located above the New Fork River. This proposal is unworkable, capricious and arbitrary. Moreover, the BLM has no right to limit the number of rigs working at any one time. Limiting the area north of the New Fork River to only 2 rigs operating at any one time would result in significantly lengthening development of the north end the Pinedale Anticline. Assuming 20 sections developed, 40 acre spacing, 2 wells drilled per year per rig, and two rigs, development of the area north of the New Fork River would take 80 years. The economics of delaying drilling have been analyzed. Attachment No. 6 plots recoverable reserves against present value at a 15% discount rate given varying delays in implementing drilling. Note that a delay of 40 years results in the loss of nearly all the value in developing Pinedale reserves. Operators' expenditures in leases, manpower and infrastructure for up to half of all acreage will have been negated by the BLM's proposal to limit the number of rigs. 12 13

Such extremely slow development has other impacts. Operators might not be able to drill wells before the end of the primary term of a lease, resulting in loss of lease. Drainage may occur if one operator is not able to offset a well across a lease line. There is also no mechanism in place to allocate rigs. In short, restricting rigs is an ill-advised plan that has highly negative consequences for operators, with no demonstrated benefit for area wildlife. An economic taking will result from restricting the number of rigs that may operate during any given period. The Anschutz Wyoming Corporation strongly encourages the BLM to abandon any attempts to place numerical rig restrictions on operators. 14 15

• Conclusion

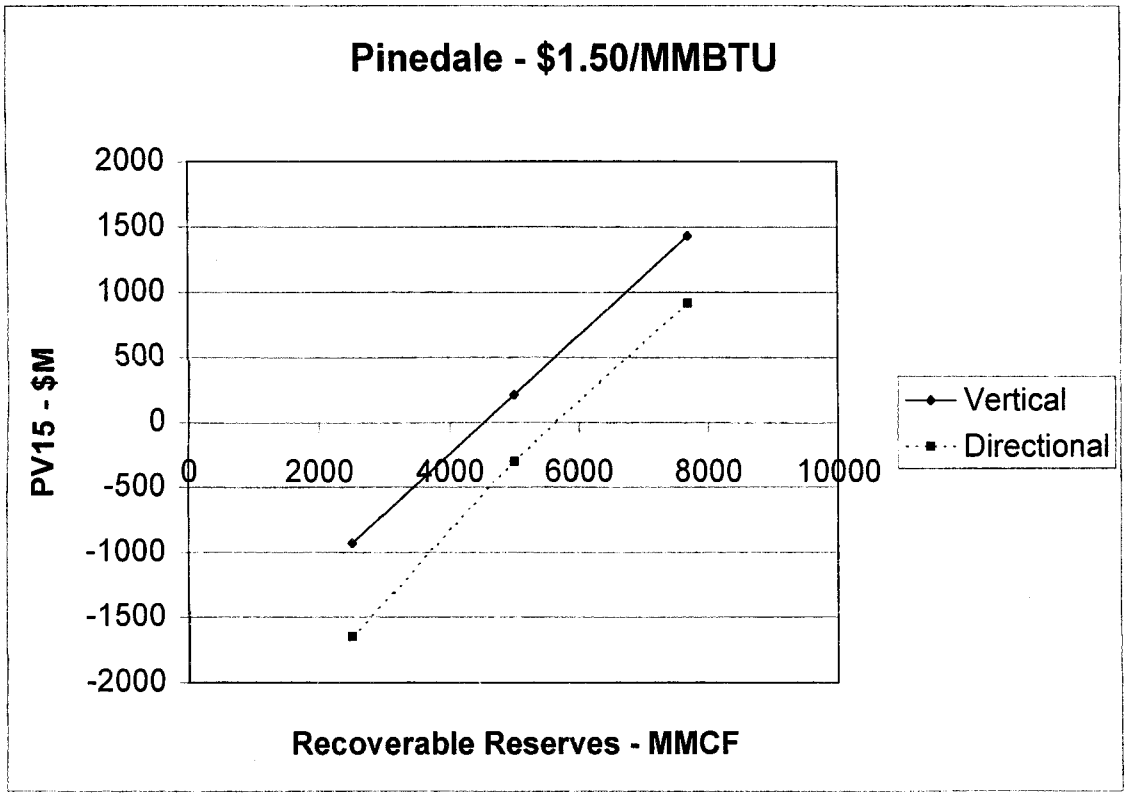
The Anschutz Wyoming Corporation encourages the BLM to utilize the Standard Stipulations Mitigation Alternative in the Record of Decision for the Pinedale EIS. Proposed limits on number of rigs, surface occupancy, and number of drill pads per section will have detrimental impacts on operators, leading to the economic taking and reduction in value of operators' leasehold, loss of royalty to the Federal Government, and loss of taxes to the State of Wyoming. The implementation of an overarching rule to allow the BLM to waive surface restrictions, as necessary, to ensure operators have access to economically viable drilling locations will avoid the economic taking of operators' leasehold.

Thank you for your consideration of our comments. Please call me at (303) 299-1479 with any questions.

Sincerely,

Eric L. Root
Pinedale Project Manager
Anschutz Wyoming Corporation

cc: Aaron Clark



Attachment No. 1

Pinedale Economic Assumptions

- Initial Rates & Reserves

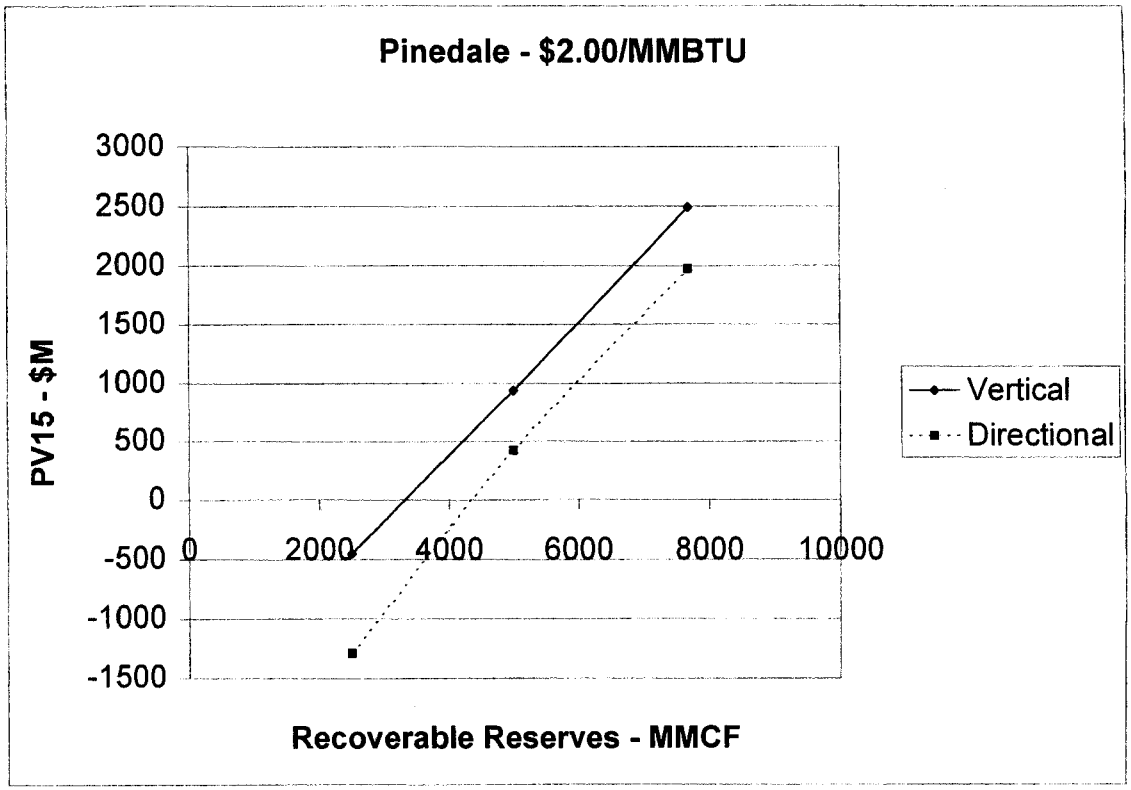
IP – MMCFD	Reserves - BCF
1.7	2.5
3.3	5.0
5.1	7.7

- Drilling Costs
  - Straight Hole $2.35 MM Completed
  - Directional Costs $2.90 MM Completed
- Product Price Transportation, Shrinkage & Fuel Costs

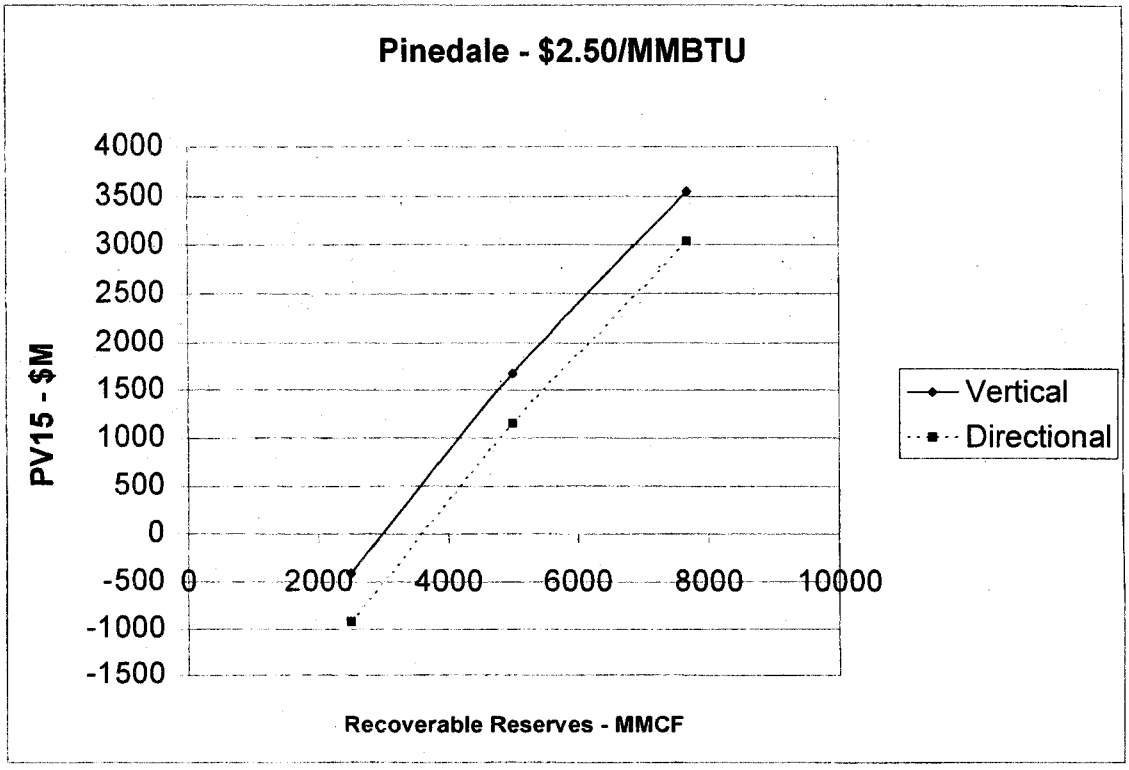
SW Wyoming Price $/MMBTU	Transportation Costs $/MMBTU
1.50	0.27
2.00	0.40
2.50	0.53

- Heating Content
  - 1100 BTU/CF
- Operating Costs
  - $3000/mo/well
  - $3.00/bbl water
- Water Rates
  - 10 BW/MMCF
- Condensate Price
  - $18/BBL
- Condensate Rates
  - 10 BC/MMCF
- Escalation Rates
  - Product Prices – 3%
  - Operating Costs – 3%

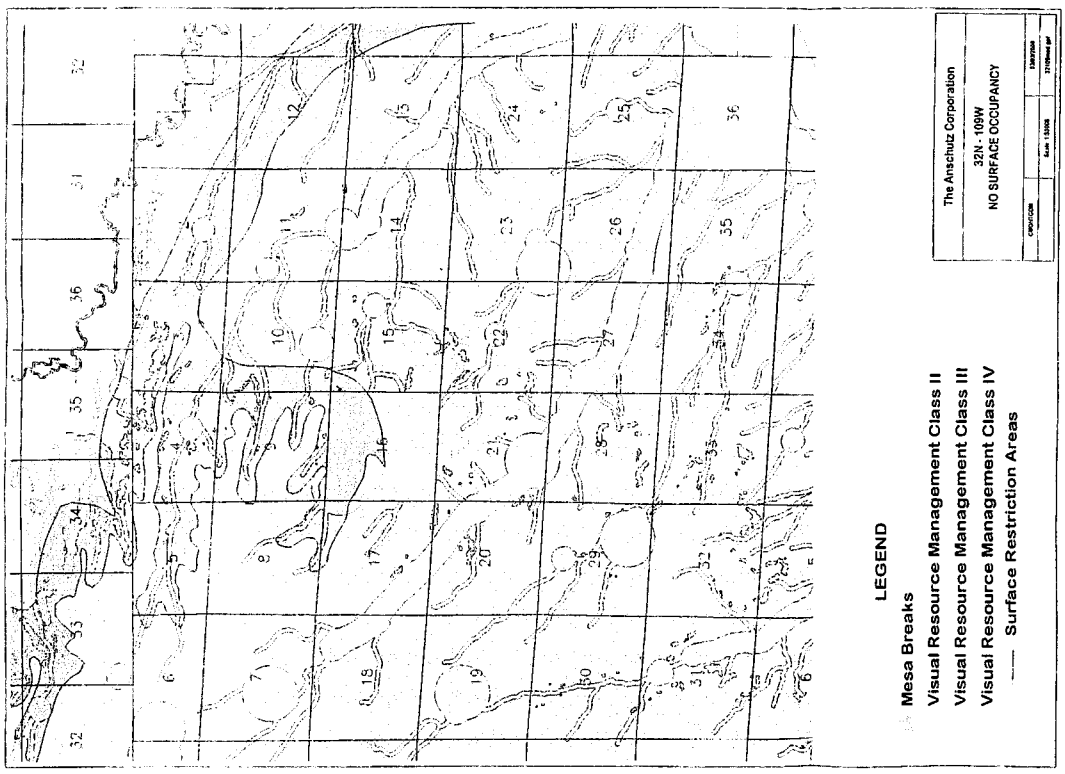
Attachment No. 3



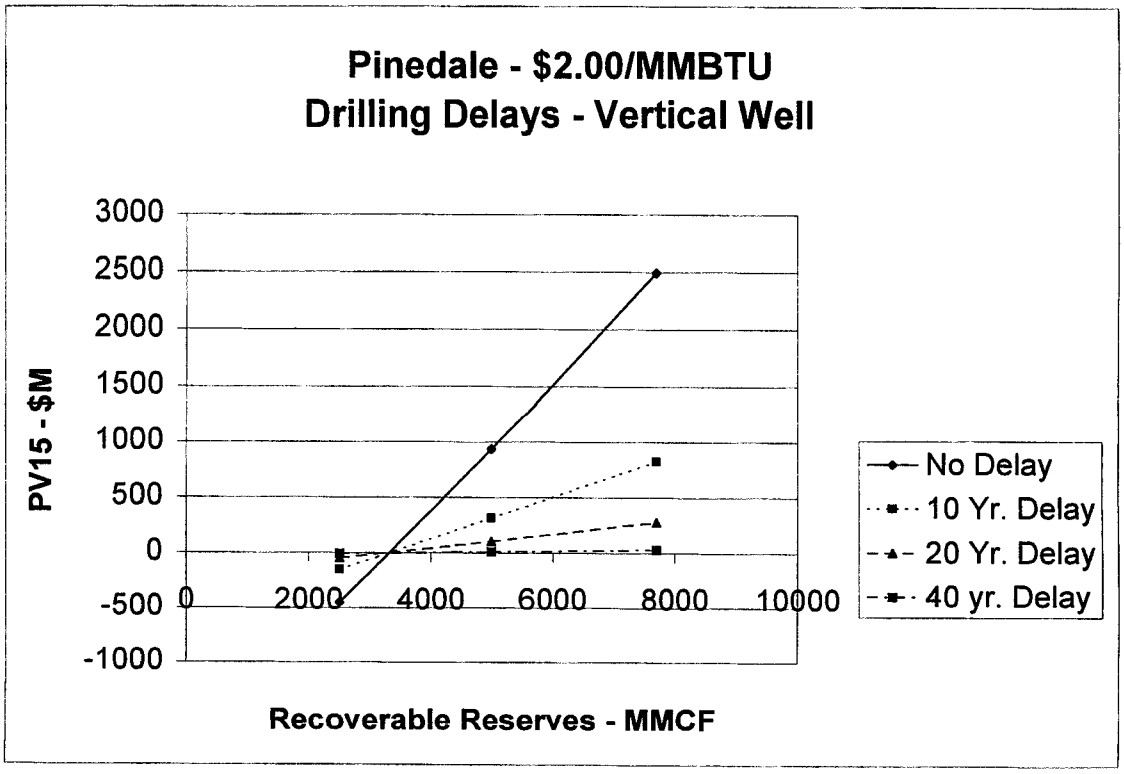
Attachment No. 4



Attachment No. 5



Attachment No. 6



LETTER 9

BJORK, LINDLEY, DANIELSON & BAKER, P.C.
ATTORNEYS AT LAW

1600 STOUT STREET,
SUITE 1400
DENVER, COLORADO 80202

PETER A. BJORK†
LAURA LINDLEY
GREGORY R. DANIELSON*
JOHN P. BAKER
DAVID R. LITTLE
JENNIFER HUSSIN
RICHARD C. NOYES
MIRIAM S. MAZEL

ANN M. EASTBURN
SPECIAL COUNSEL

TELEPHONE: 303-892-1400
FACSIMILE: 303-892-1401
www.bldblaw.com

†ALSO ADMITTED IN WYOMING
*ALSO ADMITTED IN NORTH DAKOTA

February 3, 2000

Via Overnight Delivery

Bureau of Land Management
Rock Springs Field Office
280 Highway 191 North
Rock Springs, WY 82901

Attention: Mr. Bill McMahan
Project Manager

Re: Pinedale Anticline DEIS

Dear Mr. McMahan:

We represent HS Resources, Inc., one of the lessees in the Pinedale Anticline Project Area ("PAPA"). HS' leases are generally located on the north end of the Project Area. As a party who will be directly affected by the record of decision adopted at the conclusion of the EIS process, HS Resources submits these comments on the draft environmental impact statement.

General Comments

First we would like to commend BLM and the consulting firm for preparing a well written draft environmental impact statement. Although, as you will see from HS' comments below, HS has serious concerns with the onerous restrictions which would be imposed if the record of decision adopts the Resource Protection Alternative, we do agree that BLM has produced a professional product in this draft environmental impact statement.

Because of the length of the document and the number of issues addressed, HS will focus its comments on those issues of greatest concern and potential direct impact to its operations. However, HS hereby incorporates by reference the comments on the draft EIS which will be filed by the other operators in the PAPA.

Inadequate Disclosure of the Combined Effect of Restrictions on Drilling

The draft EIS fails to disclose the true impact of the drilling restrictions proposed in the DEIS on the ability of a lessee to develop its leases. The reason for this is that the impacts of the various restrictions are examined separately, without any analysis of the cumulative effect of these restrictions. For example, Table 4-16 identifies a number of locations which would be eliminated by the .25 mile buffer zone around occupied dwellings, areas zoned residential and subdivided lands. However, the draft EIS does not show how many more locations would be eliminated by the "100 feet to 1 mile" avoidance distance around Native American sacred sites. In order to fairly disclose the impacts of the various use restrictions, the EIS should contain a set of overlay maps which show the combined impact of the various restrictions presently existing on the leases (*e.g.*, big game stipulations) with the restrictions proposed in the draft EIS (*e.g.*, sensitive viewshed or Native American sacred sites avoidance areas). Such an exercise will disclose the true impact of the BLM's Resource Protection Alternative, which will make finding an acceptable drillsite location like looking for the proverbial needle in a haystack. 1 2

Visual Resources

The draft EIS designates a sensitive viewshed which encompasses far more than the 5,191 acres which are classified as VRM II in the Pinedale Resource Management Plan. The total acreage contained in the Sensitive Viewshed Sensitive Resource Management Zone should be quantified, although it is apparent from comparing Figure 3.10 with Figure 3.9 that the sensitive viewshed draws in far more area than was classified as VRM II in the RMP. BLM acknowledges at page 3-27 of the DEIS that it has not changed the VRM classifications from those set forth in the Pinedale RMP and that such changes are outside the scope of this EIS. Yet the restrictions proposed under the Resource Protection Alternative would have the effect of expanding the VRM Class II classifications beyond those contained in the RMP. The unilateral extension of the "sensitive viewshed" together with its restrictions on operations constitutes an unlawful amendment of the resource management plan and of the terms of HS' oil and gas leases. HS' leases contain stipulations which prohibit surface occupancy only within areas mapped as Class II visual resource management areas in the Pinedale RMP. According to Table 2-8, if the Resource Protection Alternative is adopted in the record of decision, this stipulation would be amended without HS' consent not only to prohibit locations within VRM Class II areas but also to allow no more than four well pads per section on lands within the sensitive viewshed but outside the Class II areas. 3 4 5

Table 2-8 also states that no development activities, including roads and pipelines, would be allowed on slopes in excess of 15%. This is a further amendment of HS' leases which, according to Lease Notice No. 1, restrict operations only on slopes in excess of 25%. When HS acquired its leases, it determined that it could reasonably develop the leased premises without placing surface facilities within the VRM II area as mapped in the Pinedale RMP. The Resource Protection Alternative described in the draft EIS would severely restrict (if not eliminate) HS' ability to fully 6 7

develop its leases. Table 2-8 makes it clear that, were BLM making the decision today, it likely would not issue the leases which HS now holds. (Table 2-8 states that BLM would consider not reissuing leases in VRM Class II areas if they expired.) However, the fact remains that the BLM issued valid leases to HS' predecessors in 1993 based on a valid resource management plan. Subsequent changes in surface use in the Pinedale area cannot justify the government's unilateral amendment of the lease terms. 7 8

On Pages 4-60 through 4-62 the BLM sets forth a variety of "visual mitigation opportunities" which "should be implemented." While HS does not object to reasonable measures to limit visual impacts such as painting facilities to blend in with the surrounding landscape and using topography to screen facilities where possible, we strongly object to Visual Mitigation Opportunity No. 13 which provides that BLM will investigate the technical and economic feasibility of limiting the number of well pads in the sensitive viewshed to less than four pads per section. Since this "mitigation opportunity" goes on to state that "it is understood that less than four pads per section may result in lost opportunities to completely recover the gas resource and could be contrary to the rights conveyed to the lessee," it is not clear why BLM should even include this as a mitigation opportunity. In addition, we are puzzled regarding the inclusion of Visual Mitigation Opportunity No. 8 which provides that "BLM could solicit public input during APD review for wells located in the sensitive viewshed SRMZ. BLM should consider not reissuing expired leases in this SRMZ." Why should it be necessary for BLM to "solicit" public input on wells located within the sensitive viewshed when (a) the issue is being thoroughly exposed to public comment through this EIS process and (b) the BLM already provides for public input on APD approvals by virtue of the required thirty day posting period? 9 10

Restrictions on Well Pads

HS objects to the following statement on Page 2-5 of the draft EIS:

> The only place in the PAPA where mitigating opportunities in Chapter 4 recommend limiting well pads to less than four per section is in the sensitive viewshed area near Pinedale. Because this area is small, likely unproductive (uneconomical), and potential impacts were judged to be particularly severe, BLM was compelled to analyze well pad density at less than four per section.

To the contrary, the area contained within the sensitive viewshed as described in the draft EIS is not small, particularly compared to the acreage which HS owns. Moreover, HS disputes BLM's assessment that the sensitive viewshed is likely unproductive and/or uneconomical. In fact, BLM's own Resource Management Plan described the area within the PAPA, including that portion now described as within the sensitive viewshed, as having "very high" potential for oil and gas. *See* Pinedale RMP/FEIS, Map 2. The draft EIS offers no explanation for BLM's current conclusion that the area is likely to be unproductive. 11

The "Individual Wellsite Analysis Technical Report" contained in the separate technical report prepared with the draft EIS is misleading because it does not even purport to include locations which will be affected by the visual resource management restrictions. For example, on Page 4-56 of the DEIS, the table shows that potential well pad locations 11-5, 12-5, 14-5 and 15-5 in Section 5, Township 33 North, Range 109 West are located in visual resource management area Class II. According to Table 2-8, no operations will be permitted at those locations. However, the technical report (Page 7) shows "no surface restrictions" for potential locations 11-5 and 14-5 and shows only that the locations 12-5 and 15-5 would have to be moved 300 feet and 150 feet, respectively. The technical report should be heavily annotated to make it clear that it is correct only as to the constraints shown in the footnote to that table. Because that footnote does not include constraints due to visual resource management, residential area and recreational sites SRMZs and the like, it overstates the availability of those locations for oil and gas development. 12

HS believes that the following discussion on Page 2-42 of the draft EIS needs to be expanded:

> Two options are addressed - pad drilling and centralized production facilities. Both options could be used to significantly reduce human presence as well as surface disturbance in sensitive areas. However, it is important to point out that there is not agreement among the operators that either of these options can be successfully implemented on a large scale in the PAPA without adversely affecting their ability to achieve maximum ultimate recovery. BLM agrees with the operators that much more remains to be learned before it can be demonstrated that these options can be implemented in a cost effective manner. 13

HS agrees wholeheartedly that directional drilling from four (or perhaps fewer) drill pads per section presents numerous problems for the lessee and so seriously limits its ability to recover the resource granted by its lease as to become a taking by the BLM. As the draft EIS notes, directional drilling is significantly more expensive than drilling a vertical hole. Moreover, and not quantified in the EIS, directional drilling entails far greater risk in terms of wellbore damage and completion difficulties. As the EIS notes, only recently has industry begun to develop completion techniques which allow it to extract the natural gas trapped in the Pinedale Anticline. These completion techniques are still being perfected and to further complicate the matter by requiring the wells to be drilled directionally greatly increases the risk on the lessee. The comment letter filed by Ultra Resources, Inc. clearly sets forth the extremely high failure rate so far for directional wells in the PAPA. Ultra's comment letter also quantifies the reserves that will be lost if directional drilling is required; the resulting loss of royalties and taxes is huge and should be clearly disclosed to the public in the final EIS. 14 15

Another issue presented by the requirement that wells be drilled from a single drill pad in a 160 acre quarter section is how the BLM will determine which operator in a quarter section is entitled to construct the drill pad. For example, HS' lease WYW-130234 covers, among other lands, 16

the N/2NE/4 of Section 17, Township 33 North, Range 109 West. Will HS be able to drill a well on its lease in Section 17 if the owner of the S/2NE/4 of Section 17 has already drilled one? If the owner in the S/2NE/4 has already drilled the well, will HS be required to pay the owner of that location so that it can drill wells into the N/2NE/4 from that single allowed location? If so, what if the owner of that location imposes exorbitant demands on HS for the privilege of using that site? What if HS believes that the well pad already built in the NE/4 of Section 17 was poorly constructed or located so as to provide an inappropriate surface location for its wells and/or so as to create unreasonable risks for its employees. None of these issues is addressed in the draft EIS; they should be covered in the final.

Pace of Development

The draft EIS states almost in passing on Page 2-43 that BLM "recognizes the inherent difficulty in determining which of the operators would be allowed to drill when" if the number of rigs operating at any one time were limited to no more than five. Nonetheless, without further analysis of how such a restriction would be implemented, this mitigation alternative cannot be fairly analyzed by the public. The Resource Protection Alternative described in Table 2-8 provides that no more than five rigs will be allowed to operate at any one time in the PAPA, only two of which would be allowed to work on new locations at any one time north of the New Fork River. This restriction will increase each operator's costs as operators are usually able to negotiate a better rate if they agree to keep a rig busy over an extended period of time. If BLM adopts some sort of lottery to determine who can drill its well next, then obviously the operators will not be able to contractually agree to keep a rig busy throughout the drilling season. The impact of these additional costs should be disclosed in the final EIS. The final EIS should also discuss the mechanism which would be used to determine which operator is entitled to make use of one of the five allowed rigs at any given time. What if the lessee faces possible drainage from its federal lease to nearby state or private lands but is unable to obtain permission to use one of the five permitted rigs? Will BLM waive the compensatory royalty assessment for the period during which the operator had no control over its ability to drill a protection well? What if five rigs are operating on private and state lands within the PAPA? Will development of federal leases be delayed indefinitely while the allocated five rigs are busy drilling on fee and state lands? Is BLM prepared to suspend leases for all periods during which a lessee is deprived of the use of its lease because it is waiting in line for one of the five permitted rigs? All of these issues must be thoroughly discussed in the final environmental impact statement before BLM can consider including the restriction on the number of drilling rigs operating as a reasonable alternative. In addition, this portion of the EIS should clarify that the pace of development is going to be slowed under any alternative selected because of the big game and/or raptor and/or sage grouse stipulations which can operate together to allow a lessee only a 3-1/2 month drilling window each year.

16

Wildlife Mitigation

HS Resources strongly objects to Wildlife Mitigation Opportunity No. 18 described on Page 4-167 of the draft EIS. We recognize that BLM indicates in Paragraph 4.19.4 that Mitigation Opportunity No. 18 could not be adopted without the agreement of the operator. Nonetheless, we believe it is inappropriate to suggest to the public that BLM will extract payments from the operators for use in some offsite wildlife mitigation project. The concept of such a fund is totally inconsistent with the decisions BLM made in the resource management plan regarding the allocation of the lands in the resource area to different uses. BLM determined in the plan that it would issue leases in the Pinedale Anticline area and most of those leases are subject to stipulations which severely restrict the time of year that the lessee may drill in order to protect big game. BLM should not now extract tribute from the lessees to exercise the rights which were granted to them under the terms of their leases.

17

HS also objects to Wildlife Mitigation Opportunity No. 15 which BLM states that it can impose on federal lands. This paragraph states that operators should consider evaluating existing fences within the PAPA to determine their suitability for mule deer and pronghorn passage and to modify fences that are within migration routes to provide the least deterrence to animal movements as possible. Does this paragraph refer only to fences constructed by lessees around their facilities? If so, presumably those fences should be designed to prevent animal access to the facilities. The paragraph seems to suggest that BLM is asking operators to undertake the expense of modifying BLM constructed fences and/or fences constructed by grazing permittees. It is inappropriate to put this burden on the lessees. Fences constructed by BLM should have been constructed so as to accommodate necessary big game passage. In addition, no oil and gas lessee wants to risk liability by altering fences constructed by the grazing permittee.

18

Adaptive Environmental Management Plan

The executive summary states on Page 5 that "this EIS contains a framework for an adaptive environmental management plan that *would* be adopted for this project." The adaptive environmental management plan is attached as Appendix F to the draft EIS. HS Resources is concerned that the ambitious plan for adaptive environmental management, the cost of which BLM has stated must be borne by the lessees, will provide a blank check for the conduct of BLM projects. We agree that monitoring is an important and necessary part of the planning process and, in fact, BLM's regulations require it to monitor the impacts of its land use planning decisions. However, the suggestion in the EIS is that all the monitoring costs will be borne by the operators (see Page F-3), with no contribution by the BLM and cooperating agencies. Appendix F describes one of the purposes of the adaptive environmental management plan as to assure that non-oil and gas related BLM decisions such as grazing, recreation, etc. are coordinated with gas related development. It also states that the adaptive environmental management workshop is "intended to encourage debate about ecosystems/resource response to management actions." These goals go far beyond simple

19

monitoring of the impacts of oil and gas development on other natural resources. Appendix F contains no framework for allocating the costs or for limiting the costs or for reaching agreement on what projects will be undertaken for which the operators must bear the cost. It is presumptuous and naive of BLM to assume that operators would enter into such an agreement on such sketchy and open-ended terms. 19

Cultural Resources

The draft EIS states that BLM will require the operators to complete an ethno-historic study of the entire project area within one year of the issuance of the record of decision for this project. The study is to identify important Native American cultural, religious and traditional use areas, historic sites, trails, wagon routes and other sensitive cultural locales in the project area. DEIS at 4-63. Presumably this ethno-historic study would be in addition to typical Class III surveys of all disturbed areas. However, there is no indication of the cost of this ethno-historic study nor or whether a one year time frame is appropriate for its completion. For example, if early development in the PAPA focuses on the crest of the anticline, will the operators be required to conduct the ethno-historic study of all of the outlying areas in the PAPA? If so, the requirement exceeds what is appropriately required of the oil and gas operators. 20

The sample programmatic agreement attached as Appendix I to the draft EIS calls for the preparation of a research design which will be a "state-of-the-art research program." Is this state-of-the-art research program to be funded solely by the operators? The programmatic agreement requires a "planning document" to be submitted within one year. *See* Section I.C. of Appendix I. Who is to prepare the planning document, who pays for it and to whom is it submitted? What is the difference between the "planning document" required in Section I and the "Management Plan/Research Design" required in Section II? The programmatic agreement should contain a procedure for addressing unexpected discoveries so that operations are not unduly delayed. 21

Section 3.A.1. seems to use the phrases "area of potential effects" and "minimum intensive inventory area" interchangeably but the terms appear to have different meanings. Section I of the draft agreement defines the area of potential effects as the Pinedale Anticline gas field as pictured on Attachment 1 (no Attachment 1 is included in the draft EIS). However, Section 3.A.1.b. states that if BLM determines that a Class III inventory of the *area of potential effects* is necessary, then it need not seek the SHPO's views on identification efforts. Presumably this provision was not meant to suggest that a Class III inventory is going to be required of the entire PAPA. This presumption is reinforced by Paragraph III.A.1.c. which defines the minimum areas for intensive inventory for different projects (for example, ten acres for a wellsite). The agreement should be clear in its use of terms so that no disputes arise as to what is required. 22

Thank you for your consideration of these comments.

Very truly yours,

BJORK, LINDLEY, DANIELSON & BAKER, P.C.

Laura Lindley

Láura Lindley

c.c. Mr. Jim Peay

LL:hkf

LETTER 10

MGR

February 3, 2000

Bureau of Land Management
Bill McMahan
280 Highway 191 North
Rock Springs, WY 82901

Re: Comments on Pinedale Anticline Natural Gas Exploration and Development Project Draft EIS

Mr. McMahan:

Thank you for the opportunity to comment on the Draft Pinedale Anticline Natural Gas Exploration and Development Project Environmental Impact Statement. The following are comments from Western Gas Resources, Inc. on behalf of its subsidiaries Mountain Gas Resources, Inc. and Lance Oil & Gas Company, Inc.

Page 2-13, Column 1, Paragraph 4: This paragraph needs to be changed to indicate that an EA is underway to evaluate increased well density. 1

Page 2-15, Column 2, Special Resource Mitigation Guidelines: Unless the restrictions listed in this section are listed in the lease the BLM does not have the authority to enforce the restrictions. 2

Page 2-15, Column 1, Paragraph 5: This paragraph states that no surface disturbance will be allowed from February 1 through July 31. On page 2-38 Table 2-8 the statement is made that, under both the Standard Stipulations and the Resource Protection Alternatives, no construction will occur from February 1 through June 30. These two statements contradict each other. 3

Mountain Gas Resources, Inc.
Subsidiary of Western Gas Resources, Inc.
20 Shoshone Avenue, Suite D • Green River, Wyoming 82935 • (307) 875-8785

Page 2-26, Column 1, Paragraph 1: The sentence that starts "typically, the gathering system would be installed adjacent to existing roads" should be changed to where practical, the gathering system would be installed adjacent to existing roads. 4

Page 2-26, Column 2, Paragraph 3: This paragraph refers to leak testing the pipeline. While leak detection is one of the reasons for testing the pipeline it is also done to insure the integrity of the pipeline as a whole. It should also be noted that gas could also be used to test the integrity of the pipelines. Testing of the pipelines and gathering lines are done in accordance to API standards not ANSI standards 5

Page 2-26, Column 2, Paragraph 4: This paragraph is misleading where it states the operators will conduct pipeline inspections on a weekly basis. Pipeline Operators can perform this function only on a general basis. The operators will not drive the pipelines to inspect them for encroachment by third parties on a weekly basis. Inspecting the pipeline rights-of-ways in the project area would require the personnel to drive the pipeline rights-of-way, which would be very time consuming, will also prohibit re-vegetation of the rights-of-ways, and create additional surface disturbance. It should be noted that Wyoming State law states that third parties excavating in the vicinity of underground pipelines must notify the affected pipeline companies of the encroachment. Typically, inspections of pipelines, like those found in the PAPA, are conducted on and annual basis. As there are no federal or ANSI standards for the operations on gathering lines, the operators will maintain and operate the pipelines in accordance to their existing company polices. Please strike that portion of this paragraph that states the operators will operate and maintain the pipelines in compliance to federal and ANSI standards. It should also be noted that the BLM's stipulation to conduct weekly inspections is in direct conflict with its concerns regarding increased traffic, surface disturbance, and disruption to wildlife habitat. 6

Page 2-27, Column 2, Paragraph 1: This paragraph describes where up to 26,000 horse power of compression may be installed in the PAPA and in the last sentence it is stated that the NOx emissions were evaluated at three different levels. The document should clearly state at what emission levels and at what locations the horsepower was modeled. 7

Page 2-30, Column2, Paragraph 4 and Page 3-33, Column 1, Paragraph 3: The management objective of a 3-mile buffer on either side of the Lander Trail is arbitrary and excessive. On Page 3-33, Column 1, Paragraph 2 it states that the National Park Service determined the Lander Trail in the project area as "...not considered a high-potential segment...". As such, any additional restrictions beyond those stipulated in the lease are unnecessary. Imposing the 3-mile buffer for the visual horizon would severely restrict the economic development of leases within the area and would constitute a taking. Therefore, we request that the 3-mile buffer language be removed from this document and that only restrictions consistent with the lease stipulations be implemented. 8

Page 2-35, Table 2-8: Limiting the number of rigs operating in the PAPA is not reasonable and will be a difficult if not impossible management task for the BLM. With 9

the proposed wildlife restrictions allowing drilling activity only 3 -½ months of the year and the two rig limitation north of the New Fork River, only 4 wells per year can be developed. At this rate, it will take 99 years to develop the most prospective acreage on the crest of the anticline north of the New Fork River. This duration is longer than the term of the leases and therefore effectively prevents development of the leases. This is effectively a taking and should be mitigated with the lessee. 9

Page 2-38, Sage Grouse Leks, the 10 dBA noise increase restriction is arbitrary and totally unnecessary. The language unique to this Alternative is as follows: "Noise from projects on Federal lands and minerals would be managed near leks while they are actively attended (approximately March 1 to May 15) during the hours from midnight to 9 a.m. so that no more than a 10 dBA increase in background noise occurs at the lek." Page 4-147 explains that the male sage grouse mating display involves an acoustic signal coupled with visual displays (Eng et at. 1979; Vehrencamp and Bradbury, 1989; Gibson and Bradbury, 1985; Gibson, 1989, 1992, 1996; Gratson, 1993) so that constant noise could interfere with females attraction to male's displays.

The rest of the text on page 4-147 lists the various noise level versus distance for a car or pickup; heavy trucks, dozers and scrappers; drilling rigs and a 26,000 hp compressor station. First, cars, pickups, heavy trucks, dozers and scrappers are not constant noises. 10
Page 4-31, 2nd column, Impacts from Noise, contains a list of distances in feet from rigs versus noise levels. At 1000 feet, the level is 47.5 dBA which is less than the 49 dBA proposed limit. As the distance goes to 1320 (1/4 mile, the standard avoidance for leks) the level would be less than 47.4 dBA. Table 4-33 on page 4-76 shows noise levels versus distances for rigs and compressors. The rig data illustrates that the ¼ mile avoidance is sufficient. The compressor data assumes that 26,000 hp is used at one site which is very unlikely to occur. Although the noise level for heavy trucks, dozers and scrappers exceed the maximum 49 dBA suggested limit, these sources are not constant and would only overlap the time restriction from 6 a.m. to 9 a.m. All other listed noise sources would be at or below the 49 dBA suggested limit at ¼ mile. 11

The discussion in the technical report explains how the 10 dBA over EPA's "Farm in Valley" 39 dBA relates to the FERC Leq of 49 dBA for rigs and compressors but fails to relate the level to sage grouse. The report states that Sublette County nor the State have noise limits and that there are no standards of noise protection for wildlife. It just says that an increase of 10 dBA above background is likely to be acceptable. Therefore, the 10 dBA over background limit is arbitrary and capricious. No additional monitoring or restrictions are necessary according to the literature. This 10 dBA limit above the 39 dBA background should not be selected in the ROD as a necessary mitigation. Page 5-19 states "no cumulative noise impacts are anticipated." A statement should be made that summarizes the impacts of constant noise on leks as fully mitigated by the current ¼ mile facility and activity avoidance RMP requirements. 12 13 14

Page 2-39, Sage Grouse Nesting Habitat, Resource Protection Alternative, The limit on the number of well pads is arbitrary and is not related to any study or sensitivity analysis. 15

A ¼ mile avoidance area protects leks on a permanent basis and the nesting area is now avoided during the nesting period, restricting the number of well pads per section during non-nesting periods is unnecessary and arbitrary. 15

Page 2-40, Cultural Resources: A programmatic agreement for cultural resources is not required by NEPA. Western Gas Resources is willing to negotiate such an agreement during the EIS process or after the EIS process has been completed. This agreement should be negotiated with all of the operators involved in the PAPA. 16

Page 2-41, Table 2-9 and 2-10 both show that the total short-term disturbance of the Standard Stipulations Alternative is 9,604 acres for the 700 well level of development and 7,363 acres for the 500 well level of development. When compared to the total PAPA area that includes 197,345 acres (page 3-2, Table 3-1), this represents 4.9% and 3.7% of the PAPA, respectively. The long-term disturbance is 1,914 acres (700 wells) and 1,382 acres (500 wells) which represents 0.97% and 0.70% of the total PAPA, respectively. A reference should be made to this analysis so that the public gets the true perspective of the impacts under the SSA. 17

Page 2-43, Column 1, Paragraph 3: This paragraph discusses the "obvious alternative" of staggering development by limiting the number of drilling rigs allowed to operate in the PAPA. From a pipeline company point of view, this type of development will be detrimental to the project by causing the pipeline companies to install additional pipelines. Economics and well volumes dictate pipeline size. Operators install pipelines to handle the amount of gas available at the time of installation. Over time as the operators drill additional wells, the need would arise for additional capacity making it necessary for the pipeline companies to install additional pipelines in the area. This will increase the overall surface disturbance in the PAPA. As a well operator it would be very difficult to develop the area drilling only 4 wells per year north of the New Fork river. The area north of the New Fork river is slightly less than 50% of the project area. With only 4 wells drilled in this area a year, it will take approximately 87.5 years to drill 50% of the 700 wells analyzed by this document. This paragraph also states that the "BLM recognizes the inherent difficulty in determining which operators would be allowed to drill when". There are no suggestions offering how they will manage this "inherent problem". This leaves the operators with the uncertainty of when they may be able to drill a well in the project area. Therefore, we would like this "obvious alternative" should be dropped from consideration because it would create unnecessary surface disturbance, unnecessary development delays and it gives no assurances to the operators that they will be able to drill wells in the project area. 18 19 20

Page 2-54, Table 2-15: Because of the wildlife stipulations that cover almost all of the PAPA it will be impossible to drill the number of wells per year depicted by this table. Please adjust the number of wells to reflect a more realistic well count. 21

Page 3-33, Column 1, Paragraph 3: The mitigation to preserve the visual horizon of the Lander Trail is compromised by the BLM's own policies regarding public use of the trail 22

that allow for off-road vehicle use, grazing and camping along the course. These uses are no more intrusive than production facilities or the temporary presence of a drilling rig observed from a quarter mile distance. 22

Page 4-64, Column 2, Paragraph 5: Again the RP Alternative restricting well pads within a 3 mile buffer of the Lander Trail is arbitrary. Restricting well density to two wells per section is also arbitrary and unnecessary on a portion of the Lander Trail that the National Parks Service did not consider a "high-potential segment". Should the BLM restrict the operators to only 2 wells per section a taking situation could occur as is stated in page 2-5, column 1, paragraph 2. The BLM is also quoted on page 2-5, column 2, paragraph 3 that "it is not practical nor feasible to expect the operators to develop the natural gas resources in the PAP from 1 or 2 well pads per section". Therefore, the RP Alternative for the Lander trail should be removed form this document. 23

Page 4-72, Table 4-27: Emissions depicted in this table appear to be overstated. With the drilling restrictions of the Standard Stipulations approximately 30-35 wells could be drilled a year it and at that level of drilling it will take approximately 21 years reach the 700 well level evaluated in the EIS. At that pace of development it is unlikely 26,000 H.P. of compression will ever be needed because the new wells drilled will only offset the decline of the wells being produced. This table does not reflect the quantity of production from the PAPA. Please revise the table to include amount of production used to come up with the emissions rates in this table. 24

Page 4-77, Column 2, Paragraph 2: The noise analysis presented in the Technical Report assumes that all 26,000 horsepower is located at one location. The likelihood of all compression located at a single location is not probable with multiple operators in the play. As such, noise impacts to the Sage Grouse leks are exaggerated. Page 4-77, Column 2, Paragraph 2: The noise analysis presented in the Technical Report assumes that all 26,000 horsepower is located at one location. The likelihood of all compression located at a single location is not probable with multiple operators in the play. As such, noise impacts to the Sage Grouse leks are exaggerated. 25

Page 4-167, 4.19.5, Monitoring Requirements, first paragraph, A Wildlife Monitoring and Protection Plan negotiated between the BLM and the Operators will cover the responsibilities and costs of the monitoring activities. There is no need for an AEM plan. The operators pay royalties and taxes that should be sufficient to pay all costs. 26

Generally, the impact of restricting drillings rigs from view which are otherwise permitted under a lease could potentially be construed as a "taking", in the event that the restriction imposed circumvents the value or usefulness of the lease from the leaseholder. Operation of a drilling rig creates a temporary disturbance that should not be subject to such stringent viewshed requirements as presented in the EIS. Western would be willing to work on reasonable alternatives to mitigate impacts which may result from permanent structures. 27

Overall, Western believes that the environmental impacts, in some instances, may be overstated given the conservative assumptions, lack of baseline data and stringent stipulations. In some cases, the environmental impacts stated were derived without taking into consideration the stipulations which prohibit the implementation of the development scenarios that were evaluated. The result is an EIS with inconsistencies that hinder the ability of participants in the process to plan successful mitigation of issues as currently presented in the draft document. Further review and clarification is required prior to development of a final plan governing the Pinedale Anticline project.

Throughout the Draft EIS Western Gas is referred to as the gas gatherer, please change all such references to Mountain Gas Resources, Inc. 28

In closing, Western thanks the Bureau of Land Management for its review and consideration of Western's comments on the draft document. Western would appreciate the opportunity to provide additional comments as the process continues to develop.

Mike Todd

Right-of-Way Agent
Western Gas Resources, Inc.

LETTER 11

Ultra Resources, Inc.

RESOURCES

Bureau of Land Management
Bill McMahan, Project Manager
280 Highway 191 North
Rock Springs, Wyoming 82901

February 3, 2000

Dear Bill:

Thank you for the opportunity to comment on the Pinedale Anticline Draft Environmental Impact Statement (EIS). We appreciate your efforts to date to prepare this document and hope that our comments can help improve the Final EIS.

Executive Summary:
We applaud the honesty of the document informing the public that in this area, which has been designated for multiple use, significant changes to current resource conditions could occur with extensive development; however, upon issuing the leases, BLM made the determination that a change in landscape and land use was acceptable and the agency is now legally bound to provide for lease rights. Given this statement in the executive summary, we believe that this underlying responsibility to allow operators access to, and sufficient pad locations for, resource recovery on every lease needs to be stated at appropriate places throughout the document to ensure mitigation flexibility and timely permitting.

5-35

On page 3, paragraph 2, regarding the discussion of exposure to benzene. The document states a significant risk to 1 in one million persons exists due to benzene exposure at 350 feet. Given a Pinedale population of 1000, this is a risk of .001 to those actual residents. This risk factor would be further reduced if the actual population of the affected subdivisions were applied. The calculation in the document is incomplete and leads the public to an untrue conclusion about the risk factor of exposure to benzene from potential well locations near a subdivision. The calculation should be corrected or placed in a more appropriate context. This discussion also needs to include language stating that DEQ will regulate HAPs emissions by the enforcement of a BACT or MACT standard in order to protect public exposure to benzene. (See additional specific comments in Chapter 4 about benzene exposure.) 1 2

Chapter One:
Page 1-2: 3 mitigating alternatives are analyzed, not 2 (standard stips; RPA - pad drilling; RPA - centralized production facilities). 3

Page 1-13, first paragraph: when discussing the exceeded number of wells originally analyzed in the RMP, the document casually notes that only 54 percent of the projected impact has actually occurred. This language should be improved to direct the public to understand that under the RMP, the BLM has managed activities in such a way to minimize actual disturbance impacts to approximately half of what was analyzed, regardless of exceeding the inherently unpredictable (and frankly, environmentally meaningless) number of wells. 4

P.O. Box 1580, 44 S. Maybell, Pinedale, WY 82941
Telephone 307-367-4883 Facsimile 307-367-7003

Chapter Two:
Page 2-13, 4th paragraph: The verbiage in this paragraph should be changed to reflect that an EA is underway to analyze the impacts of 40-acre infield drilling. 5

Page 2-15: Wildlife Mitigation Guidelines: conflict in this narrative and Table 2-8: narrative in the second bullet states activity will be limited in raptor and/or sage grouse nesting habitat between February 1 through July 31. Table 2-8 states activity will be limited in these areas between March 1 and June 30. *Clarification of the actual time frame that activity will be limited in these areas is essential.* 6

Page 2-15, Special Resource Mitigation Guidelines: The document states that the BLM reserves the right to prohibit surface disturbance within 4 new areas (indicated by bullets), without citing any legal authority or scientific basis. In order to be factually accurate in this document, the BLM needs to reference its legal authority to go beyond lease language and further restrict surface development within: .25 of a mile from recreation areas; .25 of a mile from occupied dwellings; and within 100-year floodplains. (See later comment on floodplains.) [The potential impacts to drilling of these restrictions could be significant. For instance, in 9-33N-109W: the residential .25 mile NSO will cause a lack of access to the NENE and force a 2300' offset, which is beyond the 1800' offset defined in the DEIS as feasible. Further, that same restriction will cause a lack of access and subsequent NSO for 3 additional sections: 9, 10, 11.] 7

Pages 2-15 and 2-16 and the Individual Well Site Analysis Technical Report: Language stating 4,520 potential available well pad locations exist is grossly misleading to the public, particularly given the reality of overlapping SRMZ stipulations and the combined impact on access and pad locations, should all of the recommended mitigation measures under the Resource Protection Alternative be enforced. Pad locations may be available, but access could be restricted or denied if equal enforcement emphasis is placed during the APD process on avoidance of: 15% slopes, intermittent streams, NSO in the "breaks", and the sensitive viewshed protection area, to name a few. For honest presentation to the public and clarification to the BLM area office staff who will be responsible for permitting decisions, the document should include a map and update the location descriptions in the Technical Report to illustrate the locations that could *actually be sited and accessed* under all of the combined the mitigation alternatives analyzed in the document, and ultimately under the final mitigation requirements contained in the ROD. Our review of impact on accessible well locations identified in the DEIS, given all of the suggested restrictions of the overlapping SRMZs, results in a significant number of the 4,520 locations not being available. 8

Page 2-30: Management Area 2 – The Mesa Breaks. FEIS needs to explain the scientific criteria used to determine the 3600' width of the breaks. It also appears on the Mesa Spring quadrant that the "Mesa Breaks" are drawn to extend beyond the deer crucial winter range. This needs to be corrected or clarified. 9

Page 2-32, Table 2-6: This same misleading number of potential well pads exists on this chart. The numbers indicate available well pad locations solely for one specific SRMZ -- it does not reflect to the public the actual reduced number of locations in each area that would result from 10

enforcement of the all of the overlapping mitigation restrictions. For instance, to say that 655 potential well pads could exist on federal minerals within the Sensitive Viewshed SRMZ does not account for the pads that would be disallowed or deemed inaccessible at the APD stage due to the residential area SRMZ, Sensitive Soils SRMZ, Wetlands SRMZ and 100-year flood plains SRMZ. Although we acknowledge it would be a very time-consuming and complicated exercise to identify in the FEIS exactly which pad locations would be available given the RPA mitigation recommendations in the overlapping SRMZs, these issues will become a reality for operators and the public at the APD stage. The FEIS/ROD needs to either identify the locations that will be allowed regardless of their impact, or clearly state the BLM's priority ranking of the suggested mitigating alternatives and include specific instructions to the Pinedale Area Office to guide the APD process to ensure lease access. This detailed information will be vital for permitting operators, the concerned environmental community, and the affected general public. The EIS should reveal these limitations and mitigating priorities in the FEIS/ROD to avoid confusion or misleading conclusions that will only complicate and frustrate the APD process. 10 11

Page 2-25, 4th paragraph: "Remote sensing equipment will not replace the need for daily visits" should be changed to: "Remote sensing equipment does not necessarily replace the need for daily visits, dependent of the operator's corporate management style and the efficiency of the particular system." 12

Page 2-27, Section 2.5.8 Compression: Language needs to clarify if BLM intends to enforce 26,000 hp as the level of concern or the amount of actual emissions analyzed. For instance, per Table 4-27, 26,000 hp results in 492.7 tons of NOx emissions @ 0.7 g/hp-hr, however 693.5 total tons of NOx (@ 1.5 g/hp-hr was analyzed and found to not cause unacceptable levels of visibility degradation. Regardless of the amount of horsepower, 693.5 total tons is the acceptable maximum emissions allowed under this analysis and *BLM needs to clearly state in the FEIS/ROD that 693.5 total NOx tons (and all other maximum pollutant totals modeled) is the level of concern which will trigger additional air quality analysis, not 26,000 horsepower regardless of the actual emissions.* 13

Page 2-27, Section 2.5.10 Seismic Surveys: Needs to be updated to acknowledge the completion of the seismic tests that have recently been conducted. 14

Page 2-34, Section 2.7 Mitigation Alternatives: Language needs to be included to explain why the proposed mitigation alternatives reflect no difference in impacts between project-wide development and limited crest area development. If, in reality, activity is limited to the crest of the anticline, overall disturbance to the SRMZs will be centralized causing less animal dislocation, displacement and habitat disturbance. However, as currently written, the public is left with the impression that impacts are the same. Since significance thresholds would not be exceeded under the crest only scenario at the same rate as the project wide scenario, the document should reflect the different needs and options for mitigation that could occur to respond to the different development scenarios. 15

Table 2-8:

- Residential Areas SRMZ: We question the federal authority in the BLM standard stipulations for avoidance within .25 miles of occupied dwellings on Federal lands and minerals. Please state that authority here. 16

- Sensitive Viewshed SRMZ:

1. Standard stipulations alternative: BLM needs to specifically define for the public and the BLM employees in the Pinedale Area Office who will be issuing APDs the level of activity that will be allowed under the ROD to accomplish "no result in degradation of the Class II visual integrity." As currently written, it could be interpreted by different BLM employees to mean 0, 1 or 20 visible rigs; it could mean 1 visible road or 5 places in 2 roads that are visible from certain locations. As written, the language is completely unreasonable for its lack of specificity. **Language needs to be included in the ROD clearly outlining what level of oil and gas activity will be allowed before a "level of degradation" occurs.** 17
2. RPA alternative: Pursuant to the commitment in the Executive Summary to balance leasehold rights with resource protection, the language should be amended to read, "Well pads would not be allowed in VRM Class II areas...until it could be clearly demonstrated...would not result in degradation of the Class II visual integrity; *however VRM-II visual sensitivity limitations cannot be enforced to result in denied access, NSO status to certain leaseholds or acceptable pad locations, or limiting pad locations to less than 4/section."* 18
3. A map needs to be included illustrating for the public the number of pad locations that become inaccessible or NSO due to the restriction, "No development activities (including roads and pipelines) would be allowed on slopes in excess of 15 percent...." 19
4. All of the VRM-II in the Two Buttes quad is exempted from the Viewshed SRMZ. Why? 20

- Lander Trail Resource Protection Alternative: "Between 1.5 and 3 miles north of the trail no more than 8 pads/section would be allowed" conflicts with the 4 pads/section restriction of the Antelope Crucial Winter Range in the same area. Table needs to be amended to clarify what will actually be allowed: 4 pads/section or 8 pads/section? 21

- Steep slopes: In standard stips and RPA alternatives, clarify use of the word "avoid" in reference to disturbance of all project components. Does it mean: "no disturbance will be allowed", or does it mean "work to minimize" disturbance? Specific definition of the word is essential for a true understanding by the BLM permitting staff of what to allow in area of "steep slopes" 22

- 100-year Flood Plain: We question the BLM's legal authority to prohibit well pad location in 100-year flood plains. (See language regarding NSO in floodplains in Chapter 4.) 23

- Sage Grouse Nesting Habitat: A map needs to be included which identifies and delineates "high quality" and "lower quality" sage grouse nesting habitat in order to avoid future confusion during the drilling process. 24

- Native American Sacred Sites, standard stipulation alternative: We are concerned with the ambiguity of the statement, "Avoidance distances would depend on the importance of the features involved and their topographic setting as well as the technical economic feasibility of meeting the rights of the mineral lessee." Clarification of who defines the "importance of the features" -- is that Native Americans or the BLM, and how that determination is made? The document also states on page 4-65 that although the National Park Service does not define the portion of the Lander Trail in the PAPA as a "high potential segment", the Pinedale BLM 25

office does not agree. This is an example of how clarification is essential for whom or what agency will set and have the final authority on the cultural significant thresholds in the PAPA and how those levels will be enforced. Further, maximum avoidance distances from cultural sites need to be determined in the ROD so that operators and BLM staff understand the "rules." (See future comments on Cultural Programmatic Agreement.) 25

- The language used in the Antelope Crucial Winter Range regarding centralized facilities needs to be applied to the Mule Deer Winter Range: "Up to 16 well pads/section may be allowed if centralized production facilities are constructed *so that only emergency trips would be required* during the crucial winter period." 26

Page 2-42, last paragraph: BLM states that under the RPA the entire Sensitive Viewshed SRMZ would be managed as if it were VRM-II. The document needs to state that the BLM does not have the legal authority to impose this objective without formally changing the VRM designations and that VRM objectives can not be enforced to violate existing lease rights. 27

Page 2-42, Section 2.7.2: Discussion about the RPA should include scientific data or explanation for why circumstances have changed to necessitate greater mitigation that that provided for in the RPA's standard stipulations. 28

Page 2-43, paragraph 3: It is factually incomplete for the BLM to state, "BLM recognizes the inherent difficulty in determining which of the operators would be allowed to drill when." Language needs to be included informing the public that the BLM does not have the legal authority to restrict or prioritize operator access to rigs, can not legally allow federal resource depletion or correlative rights violations in order to accommodate a goal of paced surface activity, nor can the BLM prohibit an operator from fulfilling a drilling commitment to preserve its leasehold rights. Further, BLM does not currently have the legal authority whereby it could allocate 2-5 operating rigs at one time given the variety of operators on the Pinedale Anticline with valid leasehold rights. Without further explanation, this paragraph, as currently written, leads the public to believe that the BLM has the legal authority to enforce a limit of 5 rigs, which it does not have. If the BLM simply wants to reveal to the public the impacts of only 5 operating rigs, that's a different story. 29

Page 2-42, Section 2.7.2: This entire section is deficient in that it neglects to explain to the public that the pace of development is already limited given the 4 1/2 month drilling window (July 1-Nov 15) due to sage grouse nesting habitat standard stipulations. That fact is never clearly presented to the public in this document, which could potentially lead to a misunderstanding in the public's mind about the need for further pacing of development. The BLM has the responsibility to clarify in this EIS. 30

Page 2-44, Pad Drilling Option: The assumption made by the Wyoming Reservoir Management Group that directional drilling would not be precluded for geologic reasons is not supported by the actual data in the field to date. An assumption that directional drilling will not be precluded in the future may be accurate. The geology that exists on the Pinedale Anticline causes significant drilling problems in a vertical hole that are compounded in a directional hole. The increased time required to drill a directional hole significantly increases hole variability and damage caused by over pressured sandy-shales imploding into the wellbore. The geologic nature of the Pinedale Anticline is exactly the reason that directional holes are not viable at this time. 31

Reserves

To date, five directional wells have been drilled on the Pinedale Anticline.

1.	Mesa #3-22d	Ultra Petroleum, Inc.
2.	Jensen #4	McMurry Oil Company
3.	Stewart Point #11-34d	Questar
4.	Mocroft #4-27d	Anschutz Wyoming Corporation
5.	Mesa #6	Questar

The average additional cost to drill and case these five directional wells was $655,000 per well. Of greater importance is the fact that three (wells 1, 2, and 3) of the five wells have reserves that were bypassed and their associated royalties are irretrievably lost. The fourth well required 86 days to reach TD, and after evaluation, was considered a dry hole and plugged. The fifth well has encountered cementing problems and, if remedial cementing proves ineffective, reserves will be bypassed in four out of the five directional wells completed to date. A poor primary cementing job can produce serious problems relating to fracture stimulation placement and efficiency as well as elevating concerns of shallow aquifer isolation. Proper fracture stimulation requires an effective hydraulic seal between the casing and the formation wall. If this seal is compromised, the propped fracture dimensions are compromised and the effective fracture length is less than designed. When effective fracture length is less than designed, less area is drained, hydrocarbons/royalty is lost, and maximum economic recovery is not possible. [SPE Paper #37363: "Hydraulic Fracturing of Deviated Wells" and SPE Paper #29573: "Fracturing from Highly Deviated and Horizontal Wells".]

Modern drilling techniques and the best available technology was applied to these wells. The data provides an alarming failure rate of 80%. Reserves *could be* bypassed in 100% of the wells completed.

Directional wells create increased risk in many ways:

- Risk of getting casing to bottom primarily due to increased hole instability, (Mesa #3-22d)
  - 35% of the productive pay bypassed and the associated royalty irretrievably lost.
- Risk of casing collapse, (Jensen #4)
  - 42% of the productive pay bypassed and the associated royalty irretrievably lost.
- Risk with primary cementing/water channeling, (Stewart Point #11-34d)
  - 30% of the productive pay bypassed and the associated royalty irretrievably lost.
- Risk with primary cementing , (Mesa #6)
  - Unknown at this time, currently attempting completion and remedial cementing.

Revenue

Revenue lost due to uneconomic directional wells not being drilled, resulting in irretrievably lost reserves is summarized below:

Spacing	Wells not drilled	Reserves Lost	Royalty Lost	Taxes Lost
80 acre	216	1,728,000 Mcf	$385,366,000	$367,200,000
40 acre	648	2,592,000 Mcf	$578,049,000	$550,800,000

For purposes of this exercise, it was assumed, 54 sections would be drilled and completed if there were no stipulations in place. It was also assumed that there would be 10% dry holes.

- Therefore, in the case of 80 acre spacing, 389 economic producing wells that cost $2,400,000 to drill and complete and yield 8,000 Mcf of gas. The Wyoming Reservoir Management Group estimates that up to 50% of the reserves would be lost on 80 acre spacing with 4 pads per section, requiring directional drilling.

- In the case of 40 acre spacing, 778 economic producing wells that cost $2,400,000 to drill and complete and yield 4,000 Mcf of gas. The Wyoming Reservoir Management Group estimates that up to 75% of the reserves would be lost on 40 acre spacing with 4 pads per section, requiring directional drilling.

31

In addition, this section (and the ROD) needs to include language whereby BLM makes clear to the public its decision and responsibility to permit a minimum of 4 locations/section. Given the conflicting mitigation alternatives of the RPA, in many areas, 4 locations/section will not be possible unless the BLM Area Office staff is given specific direction to allow a minimum of 4 locations/section and mitigation requirements needs to be prioritized.

It is essential for the FEIS and ROD to commit to provide the Pinedale Area office with the funding necessary to issue APDs. This document clearly states that flexibility will be required by the BLM and the operators to ensure effective permitting. But without adequate funding and staffing, permitting will be slowed and the 5 month drilling window that is available pursuant to the winter wildlife stipulations can not be met.

32

Page 2-46, second paragraph: Something is wrong with the numbers: 3.35 billion cubic feet would be "marginally economic" to drill, but is *less* than 3.95 billion cubic feet which would be "not economic" to drill.

33

Page 2-46, 4th paragraph: It is grossly inappropriate and misleading to the public to assume that the operators would develop "about 50 percent of the wells in the PAPA using pad drilling". This results in numbers in Table 2-11 that will be incorrect and are nowhere near a reasonable projection of what might happen.

34

Page 2-46, discussion of the Centralized Production Facilities needs to include language reflecting earlier discussions between the Pinedale Area Office BLM staff and the operators regarding the benefits of centralized production facilities from reduced traffic and reduced raptor perching opportunities that affect sage grouse populations. (See comments in Chapter 4)

35

Page 2-48, 1st paragraph: Not a new paragraph, a continuation from verbage on page 2-46.

36

Page 2-48, chart: Under 2 CPFs per section, either clarify that 1 - 5000 barrel production tank and 1 - 3000 barrel water tank need to be included per facility, or change the chart to show that for 2 CPFs, 2 - 5000 barrel production tanks will be necessary and 2-3000 barrel water tanks will be necessary.

37

Page 2-50, paragraph 4: Again, basing assumption for Table 2-13 and 2-14 on an estimate that half the PAPA would be developed using CPF is extremely high and is misleading to the public as to what will practically occur.

38

Page 2-52, 1st paragraph: It is factually incorrect to state: "Congress would need to pass legislation to allow for royalty rate reduction to provide relief for excessive exploration and development costs." Pursuant to Section 39 of the Mineral Leasing Act (30 U.S.C. Section 209): The Department of Interior has legal authority to grant royalty reductions to meet two specific goals: for the purposes of encouraging the greatest ultimate recovery of coal, oil and gas; and for the interest of conservation of natural resources. BLM may chose not to utilize this authority, but it is incorrect to state that they do not have the authority.

39

Page 2-54, Table 2-15: RPA alternative: With 5 operating rigs in the project area, a 4/12 month drilling window defined by sage grouse nesting seasonal restrictions, and a 35 day drilling period for straight-hole conventional wells and up to 50 for directional wells, no more than 20 wells could practically be drilled on federal lands and minerals in one year. Given the project area consists of 83.2% federal lands and minerals, with a far greater percentage of federal control on the crest of the anticline (only portions of 8 state sections (6%) exist out of a total of 119 sections (94%) on the crest), it is inaccurate to state that 40-60 wells could be drilled annually. At a maximum, with the assumption that every state section lies in the most productive locations, 40 wells could be drilled annually with a 5 rig limitation.

40

Page 2-55, Table 2-15, section on activity in residential zones. Need to clarify in the RPA alternative: "only 2 potential well pad locations would be within residential zones" *on federal lands and minerals*. Further language needs to clarify if that would be 2 pad locations at a time, per residential area, or total in all residential areas over the life of the project.

41

Page 2-56, Table 2-15: RPA alternative states: "No development activities would be allowed on slopes in excess of 15%". Language needs to clarify if that applies to access roads, or is simply limited to well pad locations.

42

Chapter Three:

Page 3-26, Section 3-9 Visual Resources: Ultra disputes the credibility, legitimacy and appropriateness of the computer model developed to generate the Viewshed SRMZ. The assumptions and criteria used (6 different view points; determination that simple sight identification is "visual disturbance") were not peer reviewed, nor in any way are the result of a participative, collaborative process. Yet, the suggested mitigation in the RPA is potentially unenforceable and at best, misleading, given its legal vulnerability. Also, on page 3-27, paragraph on Class II VRM, additional language needs to be provided to clarify how the BLM would enforce the goal, "Management activities may be seen, but should not attract the attention of the casual observer." Each reader will undoubtedly read this with his/her own bias, and the staff in the BLM Area Office have already expressed a difference in interpretation in various working meetings. The ROD needs to include specific language directing numbers of and areas for placement of locations and facilities in the VSRMZ.

43

44

Page 3-28, Figure 3-9 and 3-10: The Pinedale office BLM staff have expressed disagreement over the VRM-II designation in the northern portion of the area, as it appears in these figures in the DEIS. Clarification is essential, given these are the folks who will be issuing APDs.

45

Page 3-31, Cultural Resources: If the 257 identified cultural sites are going to eliminate well pad locations or access to well pad locations, this needs to be clarified in this document, and not kept secret from the public until the APD process. The BLM needs to clearly state in this document how it is going to enforce mitigation on the identified sites. In addition, this section mentions that ongoing consultation with tribal representatives has suggested extending disturbance buffers around some sensitive areas from .25 miles to 1 mile. This document needs to include language that clarifies this process and how decisions are made and will be enforced. 46

Page 3-33, 3rd paragraph: 3 mile viewshed boundary north of Lander Trail is disingenuous to the public and unrealistic, given the location of a major highway 1-1/2 miles south of the Trail. In addition, the suggested mitigation to preserve the viewshed and "feel" of the trail is compromised by the BLM's own policies regarding use of the trail to the general public: ORV use, camping, access to motor vehicles, etc. These permitted activities are far more intrusive and disturbing to the character of the trail to much of the general public than the observance of an oil rig or production facilities 3 miles away. Much of the proposed mitigation appears patently anti-oil and gas industry, given other allowed and BLM-promoted activities on the trail. 47

Page 3-40: Given a background noise level of 32 dBA, with an allowed 10 dBA increase under the RPA alternative, a total of 42 dBA would be allowed. On page 4-31, that noise level is indicated to be present 2,000 feet from a rig. The appropriateness and feasibility of this suggested mitigation is brought into question. 48

Page 3-42, Productivity off Southwestern Flank of the Anticline: new data should be included from 1999 drilling year to update this section. 49

Page 3-62, 100 year flood plains: What are the dates of the FEMA maps used to delineate the floodplains. Are they accurate and do they need to be updated? Many of the indicated areas are indeed dry creek bottoms of intermittent streams a long ways from any major water bodies. 50

Page 3-78, Upland Game Birds: This section (and every section on wildlife which is protected by a seasonal restriction) could be improved by including language reminding the public of the existing March 1 to June 30 seasonal restriction to protect the species. 51

Page 3-80, Section 3.20.4 Raptors: A map needs to be included identifying the raptor locations. 52

Chapter Four:

Throughout the analysis of impacts to the various SRMZs, there is no indication that concentrating activity to the crest of the anticline reduces "significant impacts". This is contrary to the logic that development across the entire project area would have a much more significant impact on visuals, wildlife, habitat, etc. than limited drilling within a 2 mile buffer zone. If there is no difference in "significant impacts" regardless of the size of impacted area, this needs to be explained. 53

4.5 Transportation: During the development of the DEIS, operators and BLM staff met with BLM official Don Schram to discuss road requirements. It was discussed that road construction requirements could be determined on a flexible case-by-case basis, when positive mitigating consequences could be achieved without compromising safety concerns. There is no discussion of this in the DEIS. Why was it left out? We would recommend that it be reinserted in the FEIS and ROD to allow for additional mitigation in areas from reduced road construction requirements. 54

4.5.3.3: Language needs to be included informing the public that implementation of this alternative will require some access and roads to be built *within the breaks*. The goal in Table 2-8 (RPA), "No well pads or other surface disturbing activities would be allowed in the Mesa Breaks Management Area" can not be achieved. Language also needs to be included that states that roads already exist in the breaks and are currently used by industry. 55

4.8.2: Significance Criteria of Visual Resources: Again, clarification is necessary to define for the public and BLM permitting staff the specific level of activity will be considered becoming "the dominant feature in the landscape." This is subjective and will mean something different to every reader. The BLM needs to clarify in its ROD and provide specific direction as to how much activity it will allow prior to "dominating the landscape." 56

4.8.3: The document states the BLM RMP should be updated to consider expanding the VRM II classification to incorporate all of the sensitive viewshed shown in Figure 3-10. The document and any future redesignation activities need to clearly state that any redesignation would not, in fact could not, jeopardize existing lease rights. 57

Table 4-25: Attached is an updated chart showing the change in operator ship to help clarify who will be active where. 58

Section 4.9: Cultural and Historic Resources:

- Areas of cultural concern need to be identified, in general terms and on a map, to minimize confusion for the public and operators regarding scope and size of concern. 59
- Page 4-63, 1st paragraph concludes: "Avoidance distances for sacred sites would range from 100 feet to 1 mile depending on the importance of the features involved and their topographic setting as well as the technical and economic feasibility of meeting the rights of the mineral lessee." The vagueness of this statement (i.e.: 100 feet to 1 mile, who makes the determination of extent of significance, who estimates the economic impact and feasibility, etc.), are all issues that must be clarified in the FEIS/ROD or past experience has shown that major problems and delays for operators will occur when attempting to permit on federal leases:
  - For instance, in 1998 and 1999, Ultra Resources prepared two formal requests to BLM for access to lands in Sections 21 and 28, T33N-R109W. The purpose of the request was to access fee leases with expiring leases. BLM denied both requests pending the completion of the Pinedale Anticline EIS for the reasons of transportation and cultural issues. Ultra attempted to identify the extent and significance of the problems (and hence help determine an appropriate mitigation buffer) by conducting a cultural investigation using a private contractor but was told by the BLM to let the EIS process identify the problem and resolve the access issues. In the interim, BLM placed an arbitrary one mile radius NSO around the Ruby Hill area (even though public access is allowed on the two track trail that runs between the Ruby Buttes.) Much to our disappointment, the DEIS does not include any documentation of attempts, correspondence or data regarding the cultural significance and conflicts associated with the Ruby Hill area and the continued appropriateness of the 1-mile buffer. Nor is the extent of the area around Ruby Hill clearly defined or identified in the EIS. When the sensitive resource areas are viewed in conjunction with one-another, and assuming the BLM enforces the one mile NSO for well pads and surface disturbing activities (i.e. access roads) for cultural sensitivity mitigation, leases in 60

Sections 34, 35, and parts of 36, T33N-R109W, cannot be accessed. If access is denied from the north to honor this cultural mitigation, access must be provided from the south. However, the VRM-II restrictions in the SVRMZ, the RPA's 15% slope prohibition, and the BLM's verbal statement that no roads will be constructed parallel to the New Fork River in the area west of the Pinedale airport, severely complicates permitting any wells with access from the south, causing a defacto NSO and violation of surface rights. Given the lack of documentation into the cultural issues around the Ruby Buttes area, real permitting complications that are caused by arbitrary boundaries in combination with the other SRMZ restrictions. This needs to be clarified in the FEIS prior to the ROD making final decisions that will have permitting impacts threatening lease access and depletion. 60

- In addition, we have some grave concerns about the proposed Cultural Programmatic Agreement. The DEIS, and specifically Appendix I, include a glaring lack of information for the public regarding why a Cultural Programmatic Agreement is actually necessary in lieu of the standard case-by-case evaluation, and how the CPA would be enforced.
  1. The document needs to include a map of the sensitive areas or "sensitive zones". If this information is to be kept confidential, the operators deserve to have a map of such areas if they are going to be affected in the permitting stage. 61
  2. While we understand BLM's authority to utilize a Programmatic Agreement as an alternative to the case-by-case approach, we have grave concerns about how it may be particularly implemented to force a "phased development" of the PAPA (as mentioned in III-A-1-d of the proposed Programmatic Agreement in Appendix I, "Project Segmentation"). We refer to *Corridor H. Alternatives, Inc. v. Slater*, 166 F.3d368 (D.C. Cir. 1999) which rejected the ability of an implementing agency to use a PA to enforce a segmented approach which otherwise violates the agency's other statutory obligations (in this case, lease rights). Ultra could not agree to a Cultural Programmatic Agreement that in any way would be enforced to stage or phase development on the PAPA. 62
  3. The BLM has also not made the case in the DEIS justifying the need for or benefit from a Programmatic Agreement throughout the entire PAPA (northern portion as well as southern portion). If applied throughout the entire PAPA, the BLM could, in fact, place a broad and unreasonable burden on many operators for mitigation of potential impacts in areas that are never, in reality, impacted. 63
  4. Operators have had no input or briefing regarding the contents of the proposed Planning Document and Management Plan/Research Design (I and II of Appendix I) – yet we are expected to pay for many activities it requires. Although we appreciate and understand BLM's authority to delegate financing of certain responsibilities, we do feel that that carries a certain obligation to work with the operators on developing the PA's scope and content, determined by the actual impact of our oil and gas activities. 64
  5. Section IV for State Lands reads, "The Bureau will take a lead in encouraging the State of Wyoming to manage cultural resources on its lands in a fashion compatible with those employed on Federal lands. The Bureau will discuss with the State of Wyoming the option of a land exchange whereby the Bureau would acquire a significant segment of the Lander Trail." These statements appear to contradict an earlier letter from the State of Wyoming to the BLM specifically rejecting the notion of managing state lands as if they were federal lands. The CPA needs to clarify this contradiction and the State of Wyoming, as a cooperating agency, needs to decide and clearly state how it is going to manage cultural resources on state lands. 65
  6. Section VII of the Programmatic Agreement in Appendix I proposes an annual public meeting, which contradicts the earlier suggestion on page 4-68 that such a meeting is a "mitigation opportunity." Is this meeting a voluntary "mitigation opportunity" or is it a "requirement" pursuant to the CPA? Also, would the meeting be in conjunction with the proposed Adaptive Management Plan meetings, the Wildlife Plan meetings, and the Transportation Committee meetings, or would it be separate? 66
  7. There is no discussion of a cost limit that would be imposed by this Programmatic Agreement, although many of the proposed elements could be quite expensive: "synthesis of previous work within the prescribed area"; ethno historical study; the entire Section II: "Management Plan and Research Design"; and V: Public Education including "videos, a web site, interpretive signs and brochures." 67
  8. We also question the requirement (page 4-63 and Section 1 Planning Document of Appendix I) for an ethno historic study. This needs to be explained, including a definition, goal, objective, cost and other details clarifying for the public and the operators exactly what would be occurring, and why. 68

- Proposed mitigation near the Lander Trail is contradictory in that "no more than 8 well pads/section would be allowed between 1.5 and 3 miles of the trail", however overlapping antelope winter range will restrict placement of pads to 4/section unless centralized facilities are utilized. Which is it? (This brings up another conflict: if centralized facilities are utilized with the incentive of 16 pads/section, in fact, will the cultural restriction to 8 locations take precedence, thereby reducing the incentive to use centralized facilities?) 67 68

- 4-65: The document states that the BLM disagrees with the NPS/LDTO's determination that the PAPA portion of the Oregon National Historic Trail did not meet the criteria for a "high potential segment." Although this may be true, BLM needs to clarify its intent and legal authority to ignore this designation and manage the trail as a "high potential segment" anyway. This is also particularly disturbing to us, given the authority granted to BLM in III-A-3-b in the proposed Programmatic Agreement in Appendix I (Page I-5) to define and evaluate areas for National Register Eligibility. Does a Cultural Programmatic Agreement give the BLM and SHPO the authority to override other agencies' determinations about cultural significance? 69

- The Cultural Mitigation Opportunities need to be clarified: are they, in fact, "opportunities" at the discretion of the operators, or are they proposals that are being developed to be included in the yet-to-be-defined "Programmatic Agreement"? (i.e. Mitigation Opportunity #2: the "Native American Interests Management Plan: who writes that, who contributes to it, who funds it, who enforces it? It is proposed to be included in the PA. Mitigation Opportunity #5 proposes an annual public meeting, which is actually required vis a vis Section VII of the Programmatic Agreement in Appendix I. As discussed above, is this meeting "a mitigation opportunity" or a "requirement" and is it in conjunction with the Adaptive Management Plan meetings, the Wildlife Plan meetings, the Transportation Committee meetings, or is it separate?) 70

4.10 Air Quality and Noise: There is an inherent conflict between DEQ stack emission requirements and BLM's viewshed management goals that need to be discussed and clarified. DEQ requires emission combustion control of condensate tanks that, in reality, will require stacks 71

the height of 30 feet. However, the BLM proposes minimizing height of facilities to 10 vertical feet to protect the viewshed. These two objectives need to be coordinated. 71

Page 4-72: Discussion and conclusion of incremental risk increase from exposure to benzene at residences 350 feet from emission sources fails to recognize Wyoming DEQ's authority and responsibility to regulate HAPs emissions under BACT and MACT. The public deserves to be informed accordingly and not left to feel as if this exposure to benzene is unregulated. 72

Page 4-75 Noise: The BLM's Wyodak EIS states that compressor locations must be "600' from sensitive receptors (residences, schools, medical facilities and recreational areas)". In addition it states, "Under current Wyoming law, the WDEQ can only require this mitigation to occur if municipal or county land use plans address siting of noise emitters." The Pinedale Anticline DEIS needs to explain its legal authority to go beyond Wyoming law and why the PAPA EIS contains more strenuous requirements than another current BLM EIS document. 73

Page 4-95: The RP Alternative on Federal Lands and Minerals concludes, "By minimizing the amount of disturbance exposed at any one time, it should reduce the potential for erosion and sedimentation impacts." Although I understand this argument for the Vegetative Resources, it needs more explanation here. As is, it misleads the public to think that pacing activity with 5 rigs at any one time is going to minimize total erosion, even though the same total amount of locations (700) could eventually be built. 74

Page 4-96: Why is the mitigating authority of the Corps of Engineers not mentioned in the discussion of the enforcement of the RP mitigating alternatives? The federal COE, a cooperating agency in this EIS, has the legal authority and responsibility to protect floodplains and wetlands. Separate BLM authority under the EIS is redundant and not necessary to protect the resource. 75

4-16-2 Significance Criteria of Grazing Resources: By which authority does BLM determine that there is a "significant impact" from a grazing allotment decline of "5 percent or more"? 76

4.17 Wetland and Riparian Resources:

- Pursuant to 3.18, it appears that the standard stipulation mitigation proposed to "avoid placement of any well pads within 100 year flood plains" is based on President Carter's Executive Order 11988 issued 23 years ago. Given the well known legal issues surrounding the enforceability of Executive Orders by agencies which have never promulgated implementing regulations (which the BLM has not, in this case), we question the BLM's ability to usurp the legitimate authority of the Corps of Engineers, a cooperating agency in this document, to mitigate impacts in floodplains. 77
- If "avoid" is defined as "minimize", Ultra can understand the goal of this proposed mitigation. But if "avoid" is defined as "no surface occupancy", given the overlapping SRMZ restrictions of slopes, erosion control, intermittent streams, this "avoidance" criteria could easily cause a takings of lease rights in certain areas deemed to be inaccessible in the permitting process by a lack of prioritizing mitigating requirements. (For example, Lovett Draw is delineated as a "floodplain" in the DEIS, but in reality is an ephemeral/intermittent draw for snowmelt runoff.) The overlapping slope, floodplain and intermittent stream restrictions recommended in the RPA for well pads and access limit locations below 4/section in the following areas: 78
    - 2 locations available and accessible in 17-32N-109W
    - 3 locations available and accessible in 20-32N-109W
    - 1 location available and accessible in 21-32N-109W
    - 1 location available and accessible in 28-32N-109W

4.18: T&E section is very complicated, but this may be unavoidable. The section neglects to mention the benefits of Centralized Facilities from reduced traffic and reduced raptor perching opportunities. These were previously discussed and identified by the BLM and WGF biologists and should be mentioned in the DEIS. 79

Page 4-125: State the legal authority by which the USFWS can require a $14.39 per acre-foot fish recovery fee. How is this enforced and collected – by the BLM? 80

Page 4-127: The document needs to include a map of the known eagle and raptor nests, to ease future permitting problems. (The map can be updated by the proposed wildlife monitoring program.) 81

Page 4-148, Compression: Noise is based on one 26,000 hp compressor and is determined to therefore have a significant impact on sage grouse nesting habitats. There are 3 proposed locations for compressors, all of which combined could not exceed 26,000 hp. So no one site will have all 26,000 hp and therefore the noise impacts or over-predicted. 82

Page 4-167: Wildlife Mitigation Opportunity 13: Is it a typo to address locations within 8 miles of a sage grouse lek? 83

Adaptive Environmental Management Plan:
Ultra Resources agrees to the concept outlined on Page F-2 that a mechanism is necessary for "continuously modifying management practices in order to allow continued exploration and development which continuing to protect the environment." We also agree to the goals set out in the bullets on Page F-2 which include a routine and regular review of the activities to date, monitoring the effectiveness of the mitigation, comparing actuals impacts vs. predictive models, tracking cumulative impacts, and allowing for stakeholder participation. However, we have grave concerns that the proposed Adaptive Environmental Management Plan is the best mechanism to accomplish these goals. The proposed AEM is far more extensive that meeting the BLM's stated objectives on page F-2, and appears to go far beyond into areas that are traditionally managed and determined by the BLM, the lead land management agency. Specifically, we are concerned with the following features: 84

1. The proposed AEM appears to develop a process whereby an ad-hoc stakeholder group instead of the BLM makes actual land management decisions. (Page F-4: Define measurable management objectives; Identify key indicators; Identify possible management actions.) This group does not have the mandate or legal requirement to manage federal lands pursuant to the laws of "multiple use" and could, in reality, misconstrue those requirements and grossly complicate the BLM's legal responsibilities.
2. The requirement of a full time employee for the first year (Page F-3). Accountable tracking of activities and monitoring to date compared to predicted levels, with recommendations from a public stakeholder group for improved mitigation if necessary (Goals on F-2), should not require a full time employee – particularly one funded by the oil and gas industry. If we are to fund a facilitator for such an annual review, I am very confident we could do that with internal staff and in far less time than a year.

3. The requirement of two new working groups, particularly the intra-agency technical work group, appears to overlap with the already functioning Transportation Committee. Since most of the members are the same, perhaps the Transportation Committee could be approached to address many of the goals hoped for with an AMP, instead of the establishment of such an onerous, new bureaucracy.
4. Designing Management and Monitoring Programs in this AEP appears to be redundant to what is already being designed by the Transportation Committee and will be included in the Wildlife Monitoring Program.

Ultra Resources agrees with the need for an appropriate and effective monitoring program to gather scientific information about actual impacts compared to predicted impacts and to compare these results to the significance criteria established in the EIS. We agree that a process in which management adjustments could be made by the BLM in the future to address new realities could be beneficial. In fact, if real impacts are shown by this monitoring process to be less than predicted impacts, we would support that this process should allow the BLM to require less mitigation, in as much as more mitigation would be required if impacts were excessive. We agree that there would be benefits from having the appropriate land managers and affected agencies annually evaluate the monitoring results and consequently adjusting their respective future management directives. In fact, in reality, this happens in the process today. We also agree to the appropriateness of an annual public meeting, showing these results and soliciting public comment about ideas for improvement. However, we do not believe that the proposed AEM is the most appropriate and efficient mechanism to accomplish these objectives. It is too cumbersome, too complicated, and too bureaucratic as proposed to be effective. Ultra would volunteer to work on a committee organized by the BLM to develop an effective alternative to the AEM to meet the legitimate objectives in a more workable manner. 84

General:

The DEIS proposes five future committees: Transportation Committee; Oversight of Cultural Programmatic Agreement including Native American Interests Management Plan (or at least an annual meeting); Adaptive Environmental Management Group which includes 2 working groups; and the Mesa Users Group. Coordination of these various groups needs to be determined, streamlined and clarified. 85

The DEIS proposes several monitoring efforts, in addition to the standard programs of Groundwater and Surface water impacts; Erosion Control, Revegetation and Restoration; Pesticide Use; Activity levels; and traffic monitoring for vehicular/animal collisions. "Unique" monitoring efforts beyond standard stipulation requirements include: Grazing allotment annual monitoring program (4-114); and a comprehensive Wildlife Management Plan that will include a continuation of the raptor, pronghorn, mule deer and sage grouse studies. In addition, information is proposed to be required to continually update the GIS layers of human settlements, topography, vegetation and livestock use. Any effort by the BLM to explain and coordinate all of this monitoring and how it interacts with all of the committees would be beneficial. 86

Wildlife Monitoring Programs:

The multi-year pronghorn, mule deer and sage grouse studies funded by Ultra Resources provided data that was unfortunately not available in time for inclusion in this DEIS analysis. Future data collection efforts from newly required monitoring programs need to be coordinated with these studies and then used in future decision-making, particularly given the subjective assumptions on which the wildlife model is based. Real data needs to be supplemented in order for the BLM to 87

make its decisions in future years. Ultra has proposed in the past, and would propose again, that one of the future efforts in the Wildlife Monitoring Program would be the establishment of a year-round test pad-drilling location to gain data about impacts on wildlife behavior near rig operations during the winter months. Decisions can continue to be made about the public acceptance of this choice, but real data is missing from the debate and would be useful. Conclusions of future monitoring programs also need to be published and presented to the public in readable format on an annual basis. Improving the public use and understanding of monitoring results can be accomplished through the development of simple, accountable monitoring and reporting programs without the complicated establishment of an "Adaptive Management Plan" process. 87

Ultra Resources is concerned about the procedure for how a Wildlife Management Plan will be developed, implemented, funded and enforced after the ROD is issued. We are concerned that the ROD will include many requirements for costly monitoring programs that are yet to be established and agreed to. We are concerned that given the text of this DEIS, the ROD will, in essence, write a blank check for companies to fill for yet-to-be-negotiated, comprehensive monitoring programs. We would encourage having a meeting as soon as possible to discuss reach agreement on monitoring programs that could then be included in the FEIS/ROD. 88

The BLM has failed to show in this DEIS that the suggested mitigation in many areas, particularly as it relates to management recommendations for the Sensitive Viewshed, the Cultural issues including the Lander Trail, and the proposed pacing of development with 5 active rigs, will in fact, solve the identified concerns. This is particularly difficult to do when addressing the concerns related to "industrialization". The document includes several mitigation measures that are extremely onerous and costly to industry, put into question an operator's ability to exercise its lease rights, and may not even resolve the public's concerns about industrialization. Although we are committed to appropriate mitigation to address the impacts of our use of public lands, Ultra urges the BLM to be ever vigilant in the FEIS and ROD to allow access and sufficient locations to provide for resource depletion – as was granted when issuing the leases. 89

We are also very concerned with how the ROD will balance all of the projected impacts and mitigation measures predicted in this document with the BLM's responsibility to issue APDs in a timely and efficient manner. Given the number of overlapping concerns identified in this document, and agreements made in the existing Transportation Committee, every operator must now obtain consensus from each affected Area Office employee prior to even staking a well, and then obtain review and approval by the Transportation Committee to get access to the proposed location – which meets monthly. Without specific mitigation prioritization and direction to the Pinedale Office in the ROD, permitting of locations in the PAPA could extend far beyond the BLM goal of 30 days and may threaten an operators' ability to proceed efficiently and effectively. 90

Thank you again for the opportunity to comment. We look forward to continuing to work with BLM and the cooperating agencies toward timely completion of this document.

Sincerely,

Laurie D. Goodman

Laurie D. Goodman
Environmental Specialist

LETTER 12

QUESTAR

Questar Market Resources Group
180 East 100 South
P.O. Box 45601
Salt Lake City, UT 84145-0601
Tel 801 324 2700
Fax 801 324 2066

G.L. Nordloh

February 4, 2000

Bill McMahan (Project Coordinator)
Bureau of Land Management
280 Highway 191 North
Rock Springs, WY 82901

Re: Pinedale Anticline Draft EIS

Dear Mr. McMahan:

These comments on the Pinedale Anticline Draft EIS are submitted on behalf of an affiliated group of companies consisting of Questar Exploration and Production Company (QEP), Questar Gas Management Company (QGM), and Wexpro Company (Wexpro) (hereafter, collectively "Questar").

Questar is pleased that the BLM acknowledged, in its executive summary, that in granting Pinedale Anticline operators federal oil and gas leases, "the BLM has conveyed a right to the lessee that allows development of minerals ....", and that "the BLM no longer has the authority to preclude surface disturbing activities" on said leases. Despite these pronouncements, however, mitigation proposals in BLM's DEIS so significantly restrict the activities allowed on the leased lands that they exceed BLM's lawful authority. The BLM granted these federal oil and gas leases without "no surface occupancy" (NSO) stipulations. While the BLM may impose reasonable mitigation measures upon the leases, overly restrictive or unreasonable regulations would constitute a taking of the lessees' development rights.

In addition, BLM has a duty to impose only economically and technically feasible mitigation. Mitigation which is not technically or economically feasible will deprive federal oil and gas lessees of the ability to explore, produce and develop their leasehold. As Questar will describe in detail below, many of the proposed restrictions and mitigation measures contained in the DEIS are untested, unfeasible, and if they were to be imposed, would impermissibly deny federal oil and gas lessees their valid existing rights to develop their leasehold.

The most egregious restrictions include:

i) the overlapping seasonal and topographic restrictions, which would have the effect of closing off or severely limiting the ability to recover hydrocarbons from all or a portion of many leases;

ii) the drilling rig restrictions, which would deny operators both the ability to adequately protect their correlative rights and protect against leasehold drainage and the ability to determine the pace and timing of development of their leases based on their own economic standards;

iii) the proposed well pad location limitations, which would create excessive and unreasonable expense and deny the full exercise of lease rights to areas which could not be reached by directional drilling; and

iv) the proposal for centralized production facilities, without any demonstration by BLM that such would be either economically or technically feasible.

Each of these restrictions would significantly impact the lessees' ability to recover hydrocarbons underlying their leases, would go beyond BLM's authority, and would constitute a taking of valid existing rights. See **Union Oil v. Morton**, 512 F.2d 743 (9th Cir. 1975).

What is perhaps most disturbing is that BLM was put on notice of the legal infirmities inherent in these proposed mitigation measures early on in the scoping process. Attached is a copy of the January 12, 1999 letter to the Bureau of Land Management submitted by Marilyn Kite on behalf of the Pinedale Anticline Operators which explained how various provisions of the contemplated EIS constituted an unlawful taking of valid oil and gas lease rights. Inasmuch as many of the objectionable provisions of the preliminary EIS remain in the current DEIS, particularly in the arbitrary and unjustified restrictions proposed under the RP alternative, we submit once again that if the final EIS and Record of Decision ("ROD") carry forward such concepts without the revisions proposed herein the BLM will be committing an actionable taking.

Consistent with the representations in that letter, the Questar entities will readily endorse less drastic environmental protection measures on the Anticline that are legally permissible, and technically and economically feasible. For the reasons stated below, the current draft contains measures which are neither legally permissible, nor technically and economically feasible, and Questar respectfully requests that those measures, which retroactively deny lessees their right to explore and develop their leaseholds, be withdrawn.

1
2
2
1

I. GENERAL COMMENTS

The Resource Protection Alternative should be used as additional measures in only those specific instances where same are necessary and reasonable, but should not be adopted on a blanket basis. The blanket application of four well pads per section is not acceptable, is unreasonable and as discussed above would constitute a taking by the BLM. It is proposed to be implemented without regard to the specific factual circumstance of each potential drillsite, it renders oil and gas reserves under valid leases more expensive to recover and it will render otherwise economically recoverable reserves completely unrecoverable in certain instances. 3

Any restriction on well drilling and operations under valid and lawful oil and gas leases which leaves a substantial portion of the oil and gas under such leases unrecoverable indefinitely, constitutes a taking of existing property rights. 4

Page 2 of Executive Summary says "most of the project area is pristine and has not been adversely affected by man." This is a gross overstatement. Oil and gas leases and drilling on the anticline date back to the 1950's. Questar entities have operated producing gas wells within the northern end of the PAPA at The Mesa Unit and the Pinedale Unit since 1963. This is **not** an area that has been devoid of oil and gas operations to date. In addition, there are towns, roads and ranches throughout the PAPA. Surely, BLM did not mean to imply that only oil and gas operations adversely affect the "pristine" PAPA requiring prohibitive restrictions, whereas all other human activities therein are somehow non-adverse. 5

We commend the BLM for fairly portraying the positive economic impacts that a natural gas drilling and development program will have for Sublette County and the state of Wyoming, in addition to helping meet the nation's need for new domestic reserves.

II. SPECIFIC COMMENTS

We offer the following specific comments cross-referenced to the relevant sections of the DEIS.

Chapter One, Introduction

1.1. Introduction. This section should be amended to reflect that in addition to Jonah Gas and Western Gas, Questar Gas Management Company also has plans for gas 6

gathering lines in the PAPA. These plans are based upon its existing contractual rights to gather and process natural gas throughout the PAPA. 6

1.2. Future Exploration and Development. While still far too early in development to determine with any certainty, it appears that the Anticline Exploration/Development Scenerio, with 700 productive well pads, is plausible. We do know that the entire PAPA will not be commercially productive, and therefore explored, and that there will be dry holes drilled in the course of development.

We agree with the BLM that the level of environmental protection offered by the Standard Stipulations (SS) Alternative for Mitigation is extensive. However, we feel very strongly that the Resources Protection (RP) Alternative for Mitigation, **when applied blanketly to large portions of the PAPA**, is not necessary and is unreasonable. Some of the RP measures may be appropriate in specific cases, but the BLM should be allowed to determine those few instances on a case-by-case basis during the APD approval process rather than foisting the RP measures across the board without regard to site-specific concerns. 3

1.3. Purpose and Need. We are concerned that the facts stated in the first paragraph of this section get lost in the final analysis. This is the only explicit recognition that oil and gas development is a legitimate, competing activity on the public lands. Indeed, the consistent tone of the DEIS is that oil and gas operations are inherently noxious and illegitimate, and therefore require heavy-handed restrictions to permit more subjectively desirable uses of the public lands to take priority. 7

Chapter Two, Description of Alternatives

2.1. Introduction. This section should be amended to reflect that in addition to Jonah Gas and Western Gas, Questar Gas Management Company also has plans for gas gathering lines in the PAPA, as noted above in Section 1.1, based on its contractual right to gather. 8

If the RP Alternative mitigation measures discussed in the DEIS were included on a blanket basis in the Final EIS, they would be inconsistent with the terms of our leases, they would unduly constrain exploration and production and would cause a substantial portion of oil and gas reserves under valid oil and gas leases to become unaccessible and unrecoverable. Such a result would constitute an unlawful taking of existing property rights. 9

2.3.3. 320 or 640-acre Well Pad Exploration/Development Scenario. We do not agree that limiting large areas of the PAPA to four pads per section is technically and economically feasible for the reasons detailed below in comments to Section 2.7.4. This could require unnecessary directional drilling possibly without any environmental benefit. In fact, extended drilling times for directional drilling and the potential costly problems identified in comments to Section 2.7.4. (Pad Drilling - Downhole and Surface Considerations), could be more detrimental environmentally. Close cooperation between operators and the BLM will achieve far better results than blanket imposition of the four pads per section requirement, provided BLM is given the appropriate flexibility in the ROD. Could you please indicate in the final EIS the source of BLM's legal authority to prioritize the "Viewshed" resource over other competing, lawful uses of the public lands? 10

2.5.4. Access Roads and Transportation Plan. Questar is an active member of the transportation committee that has been formed and intends to cooperate in seeing that reasonable and economic alternatives are pursued.

In accordance with the Green River Basin Advisory Committee Transportation Planning Recommendations, "BLM should emphasize that roads are to be designed to an appropriate standard no higher than necessary to accommodate their intended functions adequately." As such, the ROD should not require graveling of roads, weather dependent, until a well is completed as a producer, thereby reducing the visual impact of the roads during drilling and allowing them to be reclaimed more easily at abandonment of a dry hole. 11

2.5.5. Well Pads. We do not believe the BLM can demonstrate, or has demonstrated, that pad drilling is technically and economically feasible at this time. Certainly, no effort is made in the DEIS to demonstrate exactly how pad drilling is currently feasible. Indeed, the DEIS acknowledges that it has not been attempted by operators in the PAPA, and that same can be imposed only if BLM demonstrates such feasibility. 12

(Page 2-15) We do not concur that the BLM, in consultation with only the affected tribes, should determine appropriate avoidance distance for disturbance relative to Native American sacred sites. While we respect the need to protect the specific sites, the affected lessee must be able to participate in the consultation to ensure the suggested avoidance distance is appropriate and reasonable under specific circumstances. We strongly encourage BLM to identify such sacred sites in the EIS so operators can make plans for appropriate avoidance in their drilling and operational plans. 13

(Page 2-17) Nothing herein should be considered a waiver of the right to object at the APD stage to the denial of any specific APD merely for the reason that it was designated in the EIS as "Eliminate Well Pad." We have not had the opportunity to examine the surface of each potentially affected location to determine if such a designation, which would require directional drilling to reach the bottom hole location, is appropriate. Site-specific analysis of a proposed location should be done at the APD stage in consultation with the BLM. Any blanket well pad restrictions or prohibitions derived from the EIS under this provision would be arbitrary and unreasonable without site specific analysis at the APD stage. 14

(Page 2-25) If elevated flare stacks are required by WDEQ to control emission of volatile organic compounds (VOC), it would not seem appropriate for the BLM to require low profile tanks. 15

2.5.6. Gas Gathering System.

As a premise to the following comments on gathering, we note that Questar Gas Management Company ("QGM") has long term contractual rights to gather and transport virtually all the gas from a portion of the lands within the PAPA. QGM's contractual rights include the option to provide both gathering and transportation pipeline service, and to contract with others for that service. At this early stage of development QGM has not determined how it will proceed with respect to all of its contractual rights, but has elected to file an application with Wyoming DEQ for compression horsepower to preserve its rights to exercise those contractual rights, without any intention of precluding such filings by others who may have contractual gathering rights. Consequently, the specific gathering facility locations and designs identified in the DEIS (as they relate to gas produced from the lands within the PAPA) do not necessarily represent the only, or even the likely, outcomes. Accordingly, any conclusions about the gathering and transportation pipeline facilities identified in the DEIS should be considered as informative and not limiting. 16

With respect to specific comments in the DEIS, some comments are presented in a general form such as:

> "The gas gathering system would typically consist of a series of 3- to 12-inch diameter buried pipelines." (Emphasis added.) See p.2-25.

whereas other statements are presented in specific form such as:

> "Gathering pipelines would be pressure tested. ...Test water would be removed and disposed of...." (Emphasis added.) See p.2-26.
>
> "The gathering system would transport gas from individual well pads to a central location where gas would be compressed into a sales pipeline." (Emphasis added.) See p.2-25.

It is appropriate to present such statements in the DEIS in general form rather than specific form. While each of these specific statements may be true in general, there will be instances where the stated action is not the most desirable approach. For example, with respect to testing, in some circumstances it could prove more practical to test the lines with air or nitrogen rather than water. Similarly, with respect to well connections, in some instances it might prove more desirable for an individual well to be connected directly into a transportation pipeline rather than into a central facility. In the same manner, surface lines may be more feasible economically and environmentally in specific settings. 16

Comments made in the DEIS with respect to gathering system design, construction and operation should be explicitly stated in the EIS as informative comments for the reader and should not be considered as requirements. Final decisions with respect to the gathering and transportation pipeline facilities should be based upon regulatory permit requirements and good engineering practice and not upon informative statements, such as those above, which are included in the DEIS.

2.5.7. Sales Pipeline.

We make the same general comments about transportation pipelines as those above in Section 2.5.6. Use of the term "sales" pipeline is a misnomer. The more accurate term is "transportation" pipeline. These large diameter pipelines move gas delivered to them by field gathering lines. Actual "sales" may or may not take place at or after the gathering lines feed into the transportation pipeline. 17

2.5.8. Compression.

We make the same general comments about compression as those above in Section 2.5.6. 18

As stated in Chapter 1 of the DEIS, the extent and nature of future development in the PAPA is unknown at this point in time. For that reason the utilization of operating parameters included in the DEIS (such as 26,000 horsepower), should be explicitly identified, in the final EIS, as informational references and not as limiting constraints. For example, Questar Gas Management's preliminary analysis indicates the need for as much as 27,000 horsepower at three separate compressor sites within the PAPA, assuming the need to move a maximum volume of 250 mmcf/d. The following are potential compressor locations for that analysis:

Location	Horsepower Requirement
Sec 7, T32N, R109W	9,300
Sec 16, T32N, R109W	4,700
Sec 34, T32N, R109W	13,000

18

As identified in the DEIS the necessary size of compressors, the compressor sites and site requirements could change (and in our view are likely to do so) as the hydrocarbon resource within the PAPA is further defined. Thus, no part of the DEIS discussion of gathering should be read as limiting which parties will render gathering services, where their compression facilities will be located, or the maximum amount of compression horsepower necessary to exercise contractual gathering rights in the PAPA.

2.7.1. Standard Stipulation Alternative.

Following are comments to Table 2-8, Resource Protection Alternative:

Sensitive Viewshed SRMZ

The RP Alternative requirement of no development activity (including roads and pipelines) on slopes in excess of 15% could in some circumstances increase disturbance. This requirement is not necessarily prudent, especially considering that the long term disturbance associated with pipelines is acknowledged to be small. The ROD should not preclude, by adopting absolute standards, the possibility of the most prudent solution in any particular circumstance. Any final requirements should provide enough flexibility to assure that the most reasonable result is obtained. 19

Steep Slopes

Obviously, if wells are not allowed on slopes greater than 15% there will be fewer location spots available than if the current Standard Stipulation alternative of 25% constraints was applied. For the operator this situation would probably require drilling directional wells (at possibly unacceptable displacements) to access their leases. All of the concerns stated at Section 2.7.4 below regarding directional drilling apply to the steep slopes constraint also. These include increased risk to drill, more time and impact to the environment, added costs that defeat economics of a commercial well and potential for complete loss of the wellbore. 19

Antelope Crucial Winter Range

The belief that eliminating production equipment at each well pad (page 2-48) will virtually eliminate trips to the well pads during the winter is not realistic. It is possible that such an approach could actually increase required visits to the wellhead during winter operation. The anticipated range of winter operating conditions will create numerous production difficulties without proper systems and equipment. In the absence of adequate systems and equipment, the estimate of visiting 5% of the well pads in the winter is highly questionable especially in the PAPA where winter operating conditions are often harsh. It is strongly recommended that any conclusions in the ROD allow for reasonable and prudent operating systems and equipment at the well pads. Those harsh conditions increase the likelihood of environmental contamination not being identified and mitigated in the short-term, if only 5% of well pads are visited each winter. 20

Deer Winter and Crucial Winter Range, and Moose Crucial Winter/Yearlong Range

Same comments as above for Antelope Crucial Winter Range.

Sage Grouse Leks and Nesting Habitat

Questar has two concerns with respect to the DEIS management of noise from project activities. First, as presented the requirement is a floating standard. Consider, as an example, that production facilities are initially sited such that they are not near any active sage grouse leks to avoid an increase in background noise level greater that 10dBA. If the location of an active lek thereafter moves closer to the already installed facilities, then the background noise level may be increased by more than 10dBA relative to such lek, and the facility design and/or operation would have to be modified even though production operations and 21

associated noise never changed. If lek locations change again, facility design and/or operation would have to be modified again. Consequently, the standard becomes a floating standard. The requirement to meet such a standard seems at best impractical and at worst impossible. Further, if after facilities are installed a lek is established at a nearby location such that the background noise level is greater by any amount than the background noise levels at other leks, it would seem obvious that the increased noise level near such facility is not a deterrent in selection of the lek location. To modify the background noise limits under such circumstances would be unreasonable. 21

The second concern with the standard as proposed is the possible application of more restrictive measures if the sage grouse becomes listed pursuant to the Endangered Species Act. It seems unreasonable to impose requirements now, which are based on circumstances that do not currently exist. DEIS comments at Section 3.20.3 (p. 3-78), indicating sage grouse are the most common and most important game bird in Southwest Wyoming, strongly suggest that sage grouse are not likely to be listed as threatened or endangered and are therefore not entitled to the strongly protective treatment contemplated by the RP Alternative. 22 23

2.7.2. Resource Protection Alternative on Federal Lands and Minerals. We hope that the statement "BLM agrees with the operators that much more remains to be learned before it can be demonstrated that these options can be implemented in a cost-effective manner" indicates the ROD for the final EIS will not implement the RP alternatives on a blanket basis. This statement seems to answer **in the negative** the question posed by BLM at Section 2.5.5 (well pads) as to whether pad drilling (as well as centralized production facilities) can be demonstrated by BLM to be technically and economically feasible. Due to the location of Questar's acreage in the northern portion of the PAPA, any such leases would be subject to the four pads per section restriction of the RP alternative in addition to being subject to the winter restrictions of the Standard Stipulations. Blanketly applied in this manner the RP alternative is not reasonable, would constitute a taking and should not be implemented. 24

The RP alternative of limiting the number of rigs working in the PAPA to five, with no more than two north of the New Fork River, to control/slow the pace of development is completely unworkable and arbitrary. Questar's acreage is already subject to Wildlife stipulations limiting drilling to the periods of May 1st to November 15th, or July 31st to November 15th. Such a methodology would in fact extend drilling in the PAPA, as well as subsequent visual and traffic impact, far into the future. The public has not been made aware 25

of these consequences which could affect future generations and the DEIS has failed to enlighten the public in this respect. 25

This scenario also places the BLM in the position of controlling and dictating which operator gets to drill and which one does not, at least as to federal lands. That alternative would create an ill-defined artificial market for both the five permitted drillsites that could be simultaneously drilled, and for the rigs necessary to drill them. Any operator not willing, or not lucky enough, to compete for and/or obtain one of the limited drilling permits will be denied the opportunity to exercise its lawful property rights, perhaps indefinitely. Further, these limitations would deny operators the ability to drill offset wells to protect their correlative rights. BLM's actions would therefore result in drainage, with no way for the operator to protect against it, raising obvious takings issues, as well as compensatory royalty issues with its lessors, including the U.S. government under the vast majority of leases in the PAPA. 26

This places an impossible burden on an operator's ability to plan not knowing if it will be allowed 2 rigs, 1 rig or no rigs for the drilling season, especially North of the New Fork River where the drilling season is already severely restricted, at times to less than four months. For example, once BLM provides a drilling permit the operator could be forced to use equipment or services it would normally consider inferior and/or unsafe just because such equipment and services were the only ones then available, due to both the limited drilling window and the artificial market created by the RP alternative.

These constraints prohibit or reduce an operator's ability to delineate the productive limits of the reservoir, produce the recoverable reserves under its leases and/or develop the field in a timely, cost effective, efficient and environmentally sound manner. For all these reasons, the BLM should not seriously consider any derivation of this alternative.

2.7.4. Options for Reducing Surface Disturbance and Human Presence.

We agree that a great deal of flexibility will be required by the operators, the BLM and cooperating agencies if reduced surface disturbance is to be effectively achieved. The ROD cannot and should not blanketly impose any of the RP alternatives. Close cooperation by the Operators and the various governmental agencies will achieve a far better result for all concerned, than would blanket imposition of the RP alternatives.

A comparison of Tables 2-9 and 2-10 (Standard Stipulations) against Tables 2-11 and 2-12 (Resource Protection Alternative) indicates short and long term disturbances to be only marginally different between the Standard Stipulation and RP Alternative relative to the total PAPA acreage. Consequently, the excessive nature of the RP Alternative relative to the Standard Stipulation Alternative does not yield sufficient gains to warrant imposing the RP Alternative burden on either the BLM or the operators. A cost benefit analysis should be prepared reflecting the additional drilling cost of $700,000 for a directional well and the perceived gains of the RP Alternative. The ROD should explicitly portray both the absolute magnitude and the relative differences of the Standard Stipulations and RP Alternatives, in light of the increased drilling cost associated with the latter. 27

Pad Drilling Option. The lack of success and poor economics of pad drilling weigh strongly against making pad drilling a requirement. It is our understanding that the Jensen 4 Well held out by the BLM as the pad drilling success has experienced collapsed casing. The recently drilled Stewart Point #11-34d experienced costly problems related to directional drilling and the Mesa #6 was unable to raise cement high enough to cover all productive Lance intervals, apparently due to circulating and cleaning problems in the deviated (non-vertical) portions of the hole. The vertical Mesa #3 well 1000 ft. north of the Mesa #6 encountered no such problems. The uncertainty of being able to technically or economically drill directional wells must be weighed heavily in the final analysis. Both for that reason, and in light of BLM's frank admission at Section 2.7.2 that the cost effectiveness of pad drilling has not been demonstrated, pad drilling should be made an option and not be made a requirement in the ROD for the PAPA. Our concerns about the technical and economic feasibility of pad drilling fall into two general categories: downhole concerns and surface considerations. 28

Drilling Pads - Downhole:

The technical and operational problems related to pad drilling, which BLM acknowledges, derive from the fact that pad drilling will require directional drilling 'S' shaped holes. The following are specific examples of such difficulties.

Directional wells are difficult to drill. They are susceptible to mechanical problems such as keyseating, stuck pipe, hole instability, fishing jobs and logging problems. Many of these problems have been encountered on recent wells such as Ultra's Mesa # 3-22d and Questar's Stewart Point # 11-34d.

A directional well will take more time to drill and will therefore have more potential for downhole problems in the drilling phase. The vertical Mesa # 3 well took 32 days whereas the directional Mesa # 6 well took 49 days. This is 17 days or 53% longer.

The directional wells will be more expensive. They will need larger rigs with more hoisting power. These bigger rigs cost more to move and to operate. In most cases it will be necessary to run intermediate casing to help reduce or eliminate the mechanical problems listed above, thereby increasing the costs. On page 2-45, the DEIS attributes to Ultra the estimate that a directional well costs $500,000 more than a vertical well. Using field estimate numbers at rig release (RR), the differential cost is more like a minimum of $685,000, as the following table indicates.

	WELL	COST @ RR
VERTICAL	SP 3-28	1,200,000
	M. Federal 15-8	913,000
	Mesa 3	845,000
		986,000 (Average)
DIRECTIONAL	Mesa 3-22	1,701,000
	SP 11-34 d	1,802,000
	Mesa 6	1,503,000
		1,670,000 (Average)

Directional wells increase the risk of tubular failures and possible loss of the wellbore. The Stewart Point # 11-34d experienced two drill string failures with parted pipe and the McMurry Jensen # 4 apparently has a casing collapse. The drill pipe was successfully fished out of the Stewart Point well and the status of the McMurry well is unknown. Depending on hole stability and other conditions, it is possible that these wells could have been lost altogether.

28

Drilling Pads - Surface Considerations:

If pad drilling were required, ideally it would be best to drill all wells on the pad consecutively. This reduces time and costs involved with rig moves. However, in reality, until the field is fully delineated, for economic concerns operators will drill one well, move off, complete the well and evaluate its potential before drilling a second well from the pad. Several problems arise when moving back onto the pad for the next well. The first problem is that there will be a flowing wellhead that will, at a minimum, have to be shut-in for safety reasons prior to rig up and kept shut-in throughout the drilling process until the next well is rigged down and moved off. Also, there may be surface equipment or temporary test facilities present that have to be moved to accommodate the rig. Loss of production from the first well, plus potentially the costs to temporarily plug the well and move equipment, may negate any location cost savings associated with the multiple well drilling pad. Additional wells drilled under this scenario (move off, complete, test and move back on) will compound the problem and the costs, as well as create safety issues since the rig will have to be placed over existing wells. Consequently, where surface conditions allow, vertical wells are highly preferable.

28

Some of the same safety and logistic concerns would apply to completions. For example, the fracturing equipment on location would have to be rigged up around existing wellhead and surface equipment. Also, for safety reasons, the existing wellheads should be shut in while rigging up or rigging down the frac equipment and while pumping the frac under high pressure. In addition, there could be problems getting a completion rig or snubbing unit set up on the middle wells (e.g., if the reserve pit is not reclaimed then there might not be a place for the anchors).

Safety issues should be a very high concern on any drilling or completion operation on a pad. With multiple wellheads and lots of production equipment in close proximity to each other, the chances of an eventual catastrophe are significantly increased. This is especially true during high traffic times such as rigging up or down.

Centralized Production Facilities ("CPF"). We are willing to consider utilizing CPF where feasible. However, such centralized facilities should be used only where determined to be reasonable on a site-specific basis in consultation with local BLM. In any event, at least four central facility locations per section should be allowed. And, at a minimum, the equipment described below (methanol supply and injector, a remote operations controller ("ROC," a common brand of remote telemetry unit) and blowdown tank) and buried

flowlines would be required at each well location to avoid line freezes. The number of CPF per section will depend on topography and the number of individual leases in the section to insure that the costs of such facilities are properly allocated to the owners of same, and also to insure that production is properly measured for revenue distribution to both working interest owners and royalty owners.

The belief that eliminating production equipment at each well pad (page 2-48) will virtually eliminate trips to the well pads during the winter is not realistic. It is possible that such an approach could increase required visits to the wellhead especially during winter operation. The anticipated range of operating conditions will create numerous production difficulties without proper systems and equipment. In the absence of adequate systems and equipment, the estimate of visiting 5% of the well pads in the winter is highly questionable especially in the PAPA where winter operating conditions are often harsh. Visiting a mere 5% of wellheads in winter increases the likelihood that an accident causing environmental contamination will go unnoticed, and therefore unmitigated, for a significant period. It is strongly recommended that any conclusions in the ROD allow for reasonable and prudent operating systems and equipment at the well pads, tailored to the specific facts of each operating location. 29

The DEIS, at page 2-48, states that one of the primary environmental advantages of CPF is the elimination of production equipment at each well pad. This is an over simplification as only some of the production equipment at each well pad can be eliminated. The distance from the well to the central pad will result in production freezing more often unless a line heater or production pack, blowdown tank and methanol storage and injection facilities are installed at the wellhead. In addition, to minimize visits to the well, a ROC will have to be installed at the wellhead for an automated choke and injector pump, and to monitor heater temperature and tubing and casing pressures. A safety relief valve and vent line will be required in the event of a flowline freeze and safety discharge. Even if a 6,000 psig flowline was installed production line freezes will still occur requiring most of the above mentioned equipment at the wellsite. Furthermore, due to high pressure, safety valves should be installed, failure of which would be a safety and environmental concern unless flow is diverted to a blowdown tank at the well. An off-location blowdown tank (at CPF) would negate the effectiveness of the safety value. Even if it were safe, the cost of a high pressure flow line is prohibitive. 30

The DEIS states, at page 2-48, that CPF reduces the need for daily equipment inspections at well pads, thereby minimizing the need to keep roads open to well pads year long. This will not always be true. With CPF more problems will occur at the wellheads, including frozen trees and flow lines. The need to keep the roads passable will be increased to maintain a supply of methanol and for operators to attend to the well. An unattended well could result in temporary increases of VOC emissions due to frozen laterals. 31

The DEIS suggests, at page 2-48, that flow from the wellhead would be piped to the CPF where all other production operations (testing, separation, dehydration, metering, etc.) would be performed. A return line for methanol from the CPF to each well pad would be necessary. This is inconsistent with DEIS comments at 4.10.3.2., paragraph 4 under CPF, which indicates that separation will take place at the wellhead. 32

Questar is concerned that, due to various ownerships in wells, CPF as perceived in this section ignores variations in well ownership and may therefore require individual metering of dry gas, and possibly off-lease measurement. Individual metering of dry gas requires that the well streams from each well be kept separate, separated and dehydrated prior to measuring and commingling for proper ownership allocation and royalty calculations. While the equipment is concentrated in a single location with CPF, no less equipment is required and visual impacts are not reduced. The solution to reducing equipment associated with each well is in the ability to commingle well streams and process the streams through fewer pieces of equipment. Consequently, the varying ownerships and the resulting requirement to separately measure gas flow from each such well will reduce the cost savings of CPF. In addition, the comment about running a return methanol line assumes that there will be no facilities at the well, which we have addressed above. At a minimum, a heater, methanol supply and injection and ROC should be located at every well. The preferred alternative would be to run a return line for dry fuel gas for the equipment at the wellsite. The flowline from the wellhead through the heater and on to the CPF must be buried and is assumed to be for purposes of this discussion. 33

Any such emergency visits, as identified at page 2-50, would be coordinated with the BLM (during critical periods only). Questar is unable to agree with the notion put forth by Ultra that 95% of the wells can go unattended for an entire winter season. Questar has operated wells on The Mesa for over 25 years and is very familiar with the operating conditions in the winter and, as such, cannot agree that these wells will not require first hand attention regularly, regardless of the configuration of the equipment. Even with telemetry and automation, the prospects for unattended operations are poor. Consequently, the 34

operators must have the discretion of determining when a well requires attention and not be restricted by the encumbrance of receiving advance permission from the BLM regardless of the time of day or night. When a well is down it is potentially critical at any time during its operation for environmental, safety and financial reasons. As a result, unnecessary delays in attending to such wells should be avoided. Often, the only method to determine a critical condition is first hand observation at the well site. 34

Chapter Three, Affected Environment

3.20.3. Waterfowl, Upland Game Birds, Furbearers, Small Game.

Upland Game Birds - Sage Grouse (pg. 3-78)

At p. 3-78, the DEIS characterizes sage grouse as "the most common and important game bird in Wyoming." Yet, the Sensitive Resources Management Zone would prohibit construction from March 1 through June 30 within a 2 mile buffer area around sage grouse leks. Figure 3-22 on page 3-79 depicts the sites of 43 known sage grouse leks and nesting habitats within the PAPA and another 22 leks immediately adjacent to the PAPA. The area virtually covers the entire Mesa, suggesting strongly that sage grouse are neither threatened nor endangered in the PAPA so as to require the prohibitive 2-mile buffer around all leks between March 1 and June 30 proposed by BLM. 35

By the BLM's own admission *"not every lek is currently active or has been monitored within the past several years to determine current level of use and there may be some areas within the PAPA that have not been surveyed for leks recently."* (Pg. 3-78) In any event, a restriction as heavy-handed as a 2-mile buffer around purported leks should require substantially more consistent and current data and conclusions than are provided in the DEIS. To the extent a lek is now inactive, creation of a 2-mile buffer around it is inherently arbitrary and unreasonable. Indeed, any buffer around an inactive lek may be inappropriate. The following table demonstrates the inconsistent, layered restrictions proposed in the DEIS to protect the admittedly abundant and flourishing sage grouse. 36 37

Time Restrictions	Restricted Areas	PDEIS Page Reference
All Year	Within 1/4 mile of lek	Page A-20
Controlled Surface Use	Within 1/4 mile of strutting	Page A-31
Seasonal - July 31	Additional 1.75 mile of lek	Page A-31
February 1 - May 15	Within 1/4 mile/strutting ground 6:00 p.m. - 9:00 a.m. daily	Page A-31
February 1 - July 31	Field Evaluation	Page A-20
February 1 - July 31	No surface use in certain areas	Page A-2
Year Round	Protecting Breeding Ground Habitat	Page A-3
March 1 - May 15	Within ½ mile of active lek midnight - 9:00 a.m.	Page A-20
March 1 - June 30	Within 2 miles of active lek	Page 4-130
March 1 - June 30	Within 2 miles (determined at onsite)	Page A-20
March 1 - June 30	No activity, active strutting/nesting areas	Page A-20
November 15 - April 30	Winter Game Bird Concentration	Page A-3
Unspecified	Eight mile setback, high probability nesting	Page 4-167

37

The Resource Management Plan requires the BLM to monitor the use patterns of deer, antelope and sage grouse. (Pg. 3-72). However, since the BLM did not have sufficient funds, Ultra voluntarily initiated a monitoring program to develop better understanding of these species. What information has been gleaned from these studies? Has any of the Ultra study's information been incorporated into this EIS? If not, why not? As these studies have 38

been ongoing for the last few years, some reflection of relevant data already obtained should be incorporated into the EIS. 38

Chapter Four, Environmental Consequences

4.6.4. Additional Mitigation Opportunities.

A number of mitigation opportunities in Chapter 4 are without merit:

Page 4-42 Residential Mitigation Opportunity 1. It is very difficult to prevent noise from drilling operations. Absent a showing of such noise-related harm, this mitigation measure should not be given serious consideration.

Page 4-42 Residential Mitigation Opportunity 7. It is ludicrous to expect the oil and gas industry to engage qualified landscape architects to develop schemes to hide drilling and production locations to the subjective standards of area residents. Reclamation and operating standards are already defined in federal law and regulations, at least as to federal oil and gas leases. 39

Page 4-43 Residential Mitigation Opportunity 9. The availability of rigs will dictate the fuel source of those rigs.

4.8.4. Additional Mitigation Opportunities.

Page 4-61 Visual Mitigation Opportunity 7. The glare from solar panels is not a serious problem. The draft EIS conclusion to the contrary is pure conjecture. 40

Page 4-61 Visual Mitigation Opportunity 13. The spacing of wells throughout the Pinedale Anticline should not be based on visual resources. Spacing should be based on field development needs, consistent with existing law and regulations and with the operators' existing leasehold contract rights. 41

Page 4-114 Grazing Mitigation Opportunity 4. It is the BLM's mandate to maintain the public lands for multiple uses. All authorized users of the public lands understand that accommodations with other authorized users are occasionally necessary. The need for such accommodation, and the periodic, temporary loss of one user's opportunities 42

due to another user's exercise of its rights, does not support the BLM's simplistic statement that loss of one user's opportunities at some arbitrary level should require compensation by a competing user. 42

4.8.3.2. Project Wide Exploration/Development Scenario.

What basis does the BLM have to limit drilling on locations or slopes in excess of 15% (as opposed to 25% under the Standard Stipulation) and to consider additional stipulations for visual reasons in areas other than VRM Class I and II Areas? Absent an appropriate factual basis and legal authority, application of such stipulations on a blanket basis appears to be arbitrary and unreasonable. 43

4.9.3.1. Cultural and Historic Resources - Summary of Impacts Common to All Alternatives.

The BLM is requiring an ethnohistoric study of the Mesa and development of a Programmatic Agreement. Since this is an unusual request, more information is required, such as: What is an ethnohistoric study? Why is it necessary? Who would be able to perform such a study? What costs are associated with it? How will it be used? What is the source of BLM's legal authority to require such studies and agreements? (Pg. 4-63). 44

4.9.3.2. Project Wide Exploration/Development Scenario - Standard Stipulations Alternative.

The BLM states that *"the NPS/LDTO (the National Park Service, Long Distance Trail Office) in the draft trail management plan, concluded that the trail through the PAPA did not meet the plan's criteria for a 'high potential segment.' BLM, who is responsible for managing the trail on Federal lands, does not agree with NPS/LDTO's conclusion regarding the management plan's ranking of the trail through the PAPA."* (p. 4-65). 45

This statement shows a blatant scientific disregard for the opinion of leading trail proponents as does the statement that the viewshed covering most of the Mesa, although classified as Class IV, should be changed to a more stringent standard. Evidently, it is BLM's intent to disregard the opinion of leading trail experts so as to foist the more stringent standard on operators.

The BLM is also proposing that the trail buffer should be expanded to three miles on each side of the trail. Three miles on each side of the trail would comprise 22,813 acres or 12 46

percent of the PAPA. Such a large area is unjustified, especially given the fact that other trail historians do not even value this stretch of the trail. (Pg. 7 of the Cultural Technical Report in the DEIS). 46

4.9.4. Additional Mitigation Opportunities.

The Lessees must be allowed to participate in any consultations regarding cultural/historic mitigation. 47

4.10.3.2. Project Wide Exploration/Development Scenario.

Centralized Production Facilities

At page 4-77, the DEIS states that well production would be processed through a condensate stabilizer located at each CPF. Processing by stabilizer is in fact far more complex than BLM acknowledges.

Stabilizing is difficult without large volumes of lean gas to absorb stabilizer overhead gas. Otherwise, the stabilizer overhead gas is so rich that it drops out in the gathering or pipe lines creating line pressure increases. The alternative is for the gathering company or pipeline company to install additional equipment for the removal of the liquids, which would be contrary to the purpose of the CPF. The CPF stabilizer option should be kept out of the ROD and provided for on a case-by-case basis with the concurrence of the BLM and the operator. 48

4.10.4. Additional Mitigation Opportunities.

Air Quality in Noise Mitigation Opportunity 2.

At page 4-78, the DEIS states that operators should install vapor recovery equipment on all production equipment in the Residential Areas SRMZ. Once again, BLM's simplistic conclusion ignores the complexity inherent in such technology. Vapor recovery systems are prone to problems, and are noisy. Equipment for the control of VOC emissions would be more efficient and accomplish essentially the same result. 49

4.16.3.2. Project Wide Exploration/Development Scenario.

The BLM's calculations for potential loss to AUMs in the PAPA are subjective and should not be used as a reason to limit drilling to four pads per section. 50

4.19.3.2. (Page 4-154 and 4-159) Project Wide Exploration/Development Scenario.

Avoiding all well pads within the Mesa Breaks Management Area, as part of the RP Alternative on Federal Lands and Minerals, would constitute an overt taking of valid existing property rights which could not be accomplished without the payment of compensation to federal leaseholders. Additionally, imposition of a blanket limitation of four wells per section in deer winter range and sage grouse nesting habitat is unreasonably restrictive and suffers from the legal infirmities discussed in Questar's introductory comments. 51

A limitation on the number of drilling rigs by the BLM is unreasonable and unworkable. It is unreasonable to consider shutting down drilling rigs during the night to mitigate noise. Daily well shut-down and start-up raises serious safety concerns, will cause significantly increased well traffic and will significantly increase drilling costs by extending the drilling period, with attendant increase in opportunities for environmental problems over the extended period. 52

4.19.4. (Page 4-167) Additional Mitigation Measures.

Wildlife Mitigation Opportunity 13. The suggestion that operators should consider not placing roads or constructing well pads in sage grouse nesting habitats within eight (8) miles of known leks is scientifically ridiculous. From the BLM's own technical reports, it is obvious that the existence of oil or gas wells do not cause a lek to be abandoned. There are existing wells in very close proximity to areas the BLM has identified as containing active leks, and no scientific data is presented to support the need for even the 2-mile setback, let alone eight (8) miles. 53 54 55

It would seem logical that a drilling well location and access road that was planned to avoid existing sage grouse nests, would have far less impact on sage grouse nests than unrestrained cattle grazing or hunters walking off roads through the brush. 56

The technical report draws it conclusions from birds trampled on beaches in New Jersey or by ORV use in California deserts. Conclusions regarding well managed oil and gas 57

operations cannot be drawn from these studies, and any conclusions so drawn are purely arbitrary. 57

Appendix A details the existing stipulations and Resource Protection guidelines operators are already subject to as part of the APD approval process. We believe that reasonable operators and a reasonable BLM staff can work together within the existing protection guidelines to adequately address all relevant concerns on a site-specific basis while allowing the operators to exercise their lease rights. The ROD must avoid mandating additional stipulations on a blanket basis that are not necessary, cannot be justified based on any real data and which are not economically or technically feasible. The imposition of the RP alternatives would confiscate Questar's right to develop its federal leasehold.

Appendix D The Executive Summary states: "Most directional wells needed to reach an 80-acre spacing are not expected to be economic at today's gas prices. Directional wells needed to reach a 40-acre spacing would be uneconomic." This conclusion is reached despite BLM utilizing several economic values which are optimistic. BLM's analysis clearly supports the need for directional drilling only as an option, on a case-by-case basis, as determined by potential recoverable reserves in conjunction with other resource protection and should not be a blanket mandate. Questar supports that approach only where directional drilling is necessary due to surface conditions at a given site and when the operator can justify the additional cost of directional drilling under its own economic criteria. 58

The economic criteria utilized by BLM assumed a production schedule, or curve, which is considerably more optimistic than actual production. Actual initial production rates are generally higher than used by BLM, but decline significantly faster resulting in poorer economic performance than indicated by the BLM. Consequently, net present value, payouts, and rates-of-return are optimistic in the BLM evaluation. 59

Additionally, the drilling costs observed in the few wells drilled on the Mesa support considerably higher costs than assumed by BLM. In Questar's comments at Section 2.7.4, a table is presented indicating directional drilling costs would be approximately $685,000 more than a vertical well. As a result, total drilling costs at rig release for a directional well without drilling problems would be approximately $3.0 million, as compared to the BLM's assumed $2.25 million. Utilizing the $2.25 million figure, the BLM's conclusion was, as stated in the Executive Summary, that directional wells would not be economic. Consequently, with the higher actual costs the wells would continue to be uneconomic in the BLM's evaluation. 60

The costs to drill and complete a well are not the only costs which a company encounters and must pay for out of production. Costs not considered in the BLM economic evaluation include acreage acquisition costs, rentals, overhead and such significant one time costs as 3-D seismic. None of these have been included in the BLM economic evaluation even though they represent real costs which must be considered by operators. 61

Natural gas development in the PAPA is very sensitive to costs and commodity prices. To mandate directional drilling when not absolutely necessary will discourage drilling, thereby placing at risk the ultimate recovery of natural gas, royalties and jobs in the Pinedale area. Directional drilling should be presented as an option on a case-by-case basis in the final EIS and ROD only when economically justifiable and as required due to site-specific surface considerations.

Appendix F Adaptive Environmental Management (AEM)

Can we assume that the intention would be to avoid imposing the restrictive RP alternatives unless the real data collected from the PAPA confirm such alternatives were necessary and reasonable in a specific area based on the AEM? This program may not be needed since the transportation and Wildlife review committees are already established and will address the need and purpose of the AEM. 62

Paragraph 5.0. Page F-3, First AEM Workshop. "Costs of these monitoring programs will have to be borne by the operators." This bold statement is deeply troubling. If BLM intends to implement such a requirement it needs to provide detailed information regarding expected and maximum costs, how same would be allocated among operators, what role the operators will have in the committee's conclusions/recommendations and what recourse they will have if they disagree. We respectfully request that BLM indicate in the final EIS and ROD the source of its legal authority to impose such costs on operators. 63

Appendix I Programmatic Agreement for Cultural/Historic Issues

Before seriously considering the Programmatic Agreement, a number of issues would need to be addressed:

i) It would be necessary to review Attachment 1 (previously identified sites).

ii) Relative to the Management Plan, we would need to see details regarding data collections, avoidance, etc. 64

iii) Relative to the Research Design comment that: "This will be a state-of-the-art research program," who is funding the studies and site evaluations? 65

iv) Relative to Section III.A.1.c., buffer areas around locations and roads, etc., seem excessive. 66

v) Relative to Section III.A.1.d., we would need to determine whether most of the area likely to be affected has been inventoried for purposes other than site specific, given that two 3-D Seismic programs were completed in 1999.

vi) Relative to Section III.A.3.d., as long as the site itself is to be avoided with a reasonable buffer, why is a 1-mile distance blanketly required? 67

vii) Relative to Section V. Public Education, the agreement needs to balance the stated objective of educating the public concerning cultural values of the area (and encouraging their visiting the area) with the objective of minimizing impacts to wildlife. 68

viii) Relative to Section XI, Public Objection, once the ROD is issued, operators and the BLM will have guidelines in place and thus any public objections should be minimal and/or handled through the various input forums allowed for in the EIS. 69

Technical Reports

Noise Analysis

2.0. The following statements in the Technical Report to the DEIS, while true, raise troublesome issues relative to proposed restrictions: 1) "Neither the State of Wyoming nor Sublette County has noise impact regulations or standards."; and 2) "There are no standards of noise protection for wildlife; however, for this study an increase of 10dBA above background is likely to be acceptable." Given this frank admission that reasoned noise standards do not exist, it would be entirely arbitrary for the BLM to create new stipulations on drilling operations in the PAPA (e.g., distance from leks for noise, shut down of drilling rigs at night) when the technical report acknowledges there are no standards and the "acceptable" increase level appears to have been pulled out of thin air. New restrictions or 70

standards should not be imposed in PAPA based on unsubstantiated assumptions of the kind noted in the referenced excerpts. 70

Cultural Technical Report

Page 2. We agree with the statement, "Sites and properties within this class are protected by numerous laws, such as the Native American Graves Protection and Repatriation Act (NAGPRA), the American Indian Religious Freedom Act (AIRFA), and by various Executive Orders." Accordingly, we do not agree that any additional regulations, stipulations or agreements are required to adequately protect the sites. We do not agree that 1-mile buffers are required to protect the sites or that any reasoned justification has been presented for same. It should be noted that the studies conducted as a result of natural gas exploration and development activities are resulting in data and information that otherwise would not have been known. In short, natural gas development has added positively to the database regarding such sites, and would logically continue to do so if given the opportunity. 71

Wildlife Technical Report

Part 1.A. (Page 1) What data does the BLM's Pinedale Resource Area have to support the definition of the "habitat" (where most sage grouse nest) as being an area within a 2-mile radius of leks? 72

The following statement, while no doubt true, raises troublesome issues relative to proposed restrictions. "The state of knowledge about impacts to fish and wildlife due to natural gas development is meager and has not substantially progressed during the past 20 years." It seems unreasonable to base assumptions on studies of habitat only, while ignoring effects on populations. Are the significant mitigation measures suggested by the BLM reasonable if there is no significant effect on the wildlife population based on the projected loss of habitat? 73

Figure 1.A.4. (Page 6) It would seem obvious from this map that a 2-mile setback of wells from leks is not necessary since there are existing wells in very close proximity to areas noted as containing leks, including wells that were drilled in 1963 and in 1981. (Pinedale Unit Well No. 8, NESW of Section 20, T33N-R109W; The Mesa Unit Well No. 1, SWNENE of Section 7, T32N-R109W and The Mesa Unit Well No. 2, located in the SENW of Section 16, T32N-R109W.) The presence of such long-term wells near leks strongly suggests that leks are not always negatively affected by drilling and producing wells. 74

Table 1.A.-1 On what basis does the BLM or WGF determine if habitat is vital, high, moderate or low? This determination must not be entirely subjective. 75

Page 8. With all of the prior research and studies that must have occurred in SW Wyoming, it seems unreasonable to use data that is inferred from trampling of birds nesting on beaches (New Jersey Coast) and crushed nests from ORV use in deserts (deserts in California). Supervised natural gas development would not have comparable impacts since roads and locations are staked out in advance and the existence of nests would be determined and avoided prior to actual surface disturbance. To the extent highly restrictive stipulations are adopted to protect wildlife within the PAPA, such restrictions should be based upon prior research and studies of the impact of oil and gas activities upon relevant wildlife populations in Southwest Wyoming, and not upon either the irrelevant studies referenced or upon mere modeling assumptions. 76

Table 1.A.-2 (Page 9) The comments regarding "diminished use of habitats - interruption of life history functions" for Mule Deer, are not applicable to oil and gas leases on The Mesa within the PAPA since it refers to Mule Deer density within a .6-mile radius of drilling wells, and .5-mile of recompleting wells, during winter. Neither of these activities (drilling and completing wells) is allowed by the BLM in the winter on such leases based on the current winter stipulations being enforced. 77

Is there any data to suggest natural gas development activities impact sage grouse, deer, etc. any more than the general public's use of the land for ORV, hunting, recreation or from domestic dogs? It is stated that these activities result in direct killing of wildlife, whereas no comparable assertion is made relative to natural gas development. 78 79

Page 13. The concept of multiple use cannot be ignored when considering mitigation alternatives. There are effects on habitat due to public encroachment through housing, recreation/hunting, livestock grazing and other disturbances which BLM makes no effort to quantify in the DEIS. BLM cannot feasibly require, by any enforceable means, grazing cattle or the recreation users to stay any required distance from sage grouse leks (or cultural sites for that matter). 80

The model results cannot be reasonably used for stipulation purposes since the data input parameters are subjective. The real data currently being collected should be used to provide for reasonable mitigation on a case-by-case basis. The BLM should avoid the temptation to impose unreasonable blanket stipulations without documented factual support. 81

Page 19. Second Paragraph. Even though it is stated that "In Central Wyoming, mule deer wintering in the vicinity of an oil field were found to not be significantly affected by oil field activities and well drilling," the DEIS nevertheless assumes the contrary. Such assumption is arbitrary and unreasonable. 82

Page 21. The report states, "In Wyoming, all nests of telemetered sage grouse were within 1.3 miles from open water." Please provide a map to show the location of open water on The Mesa within the PAPA. We strongly doubt that open water is so prevalent on The Mesa. 83

Page 21. The DEIS states that "No information has been found that relates sage grouse nesting habitat suitability to distance from roads or well pads." Despite this, the BLM suggests the need for a particular setback distance to mitigate noise. Thus, such suggestion is arbitrary and unreasonable. 84

Page 59. Given the passage of five years since collection of the only relevant evidence, it would appear that the most recent data would have very little value for planning purposes in the DEIS. 85

Page 63. The DEIS states that "Maximum fawn survival rates are mostly unchanged from before to after implementation of major projects." This stated fact seems to be lost in the conclusions. 86

Page 66. The conclusion reached in this report is that additional information would be necessary to draw conclusions regarding the relationships between well proximity and lek activity, and noise and lek activity. It would be inappropriate for the BLM to impose new stipulations without additional information that showed the mitigation measure was necessary. Without such information, imposition of new stipulations is inherently arbitrary and unreasonable. 87

IV. SUMMARY

Questar is well aware that oil and gas development in the PAPA is a controversial matter in the Pinedale community, and that BLM therefore feels compelled to engage in a detailed EIS process before such development occurs. However, the substantial appearance in the DEIS is that the factual and scientific basis BLM must have as a premise for blanketly imposing the RP Alternative restrictions does not exist. To survive legal challenge BLM may 88

only impose reasonable conditions upon a federal lessee's exercise of its valid oil and gas lease rights and may do so only after first demonstrating that the conditions are warranted under the circumstances. Other than vague assertions that various resources (e.g., viewsheds, wildlife such as sage grouse or deer, and purported but unspecified archaeological or cultural sites) require environmental protection, the DEIS is devoid of the factual and scientific underpinnings necessary to justify the highly restrictive Resource Protection alternative. The imposition of that alternative would effectively impose No Surface Occupancy stipulations in a large portion of the PAPA (due to well pad restrictions, CPF requirements, viewshed requirements, sage grouse buffers, and other seasonal restrictions), thereby denying oil and gas lessees the right to develop a substantial portion of their leases resulting in a taking of their existing property rights. Any blanket imposition of conditions which is not clearly necessary to protect a well-documented resource, and which is accomplished at the substantial loss of oil and gas resources under existing oil and gas leases, is per se unreasonable and will not survive a rigorous takings analysis. 88 89

Accordingly, Questar strongly recommends that BLM adopt no new blanket conditions for approval of oil and gas drilling permits in the PAPA other than those Standard Stipulations clearly necessary to protect identified resources on a site-specific, case by case, basis. Questar is confident that such site-specific conditions can be fashioned to address unique resource needs identified as individual wells are proposed, and is prepared to work constructively with BLM to accomplish that objective.

* * * * * * * *

Thank you for the opportunity to comment on the draft EIS document. We look forward to working with BLM to finalize a mutually acceptable and legally defensible EIS & ROD.

Sincerely,

G. L. Nordloh
President and Chief Executive Officer

Enclosure

LETTER 13

McMURRY OIL COMPANY

February 4, 2000

Bureau of Land Management
Rock Springs Field Office
280 Highway 191 North
Rock Springs, Wyoming 82901-3448
Attn.: Mr. William B. McMahan

Re: McMurry Oil Company comments on the Draft Environmental Impact Statement for the Pinedale Anticline Oil and Gas Exploration and Development Project

Dear Mr. McMahan:

McMurry Oil Company (hereafter referred to as MOC) appreciates the opportunity to participate in the public review of and comment on the Draft Environmental Impact Statement for the Pinedale Anticline Oil and Gas Exploration and Development Project (hereafter referred to as PADEIS).

MOC commends the BLM for issuing the PADEIS in accordance with the schedule required by the CEQ regulations at 40 CFR §1507.2(b)(2) and 40 CFR §1501.8(a). MOC believes that BLM's schedule for completion of the EIS and issuance of the Record of Decision (ROD) is feasible. However, MOC urges the agency to be compelled by the CEQ regulations to issue the ROD as soon as possible, even *prior* to the scheduled date of May 2000.

MOC's review and comments of the DEIS are submitted to BLM in the spirit of the CEQ regulations (see 40 CFR §1503.3(a)). MOC has endeavored to make these comments substantive and as specific as possible in order to address the inadequacies of the statement as well as the merits of the alternatives. But, because MOC as a proponent of the action has so many vested interests in this project, and because the document and supporting technical documents are so lengthy, our comments are extensive. We regret the hardship that this presents for the BLM, but feel compelled to ensure that our concerns are clearly, accurately, and thoroughly presented. It is MOC's goal to provide these comments to BLM in a manner that results in an improvement in the agency's administration of the NEPA process in the future, a credible document, and the most informed and timely decision possible.

MOC's comments are organized into three major subject headings: *NEPA Process, Omissions and Corrections, and Alternatives and Analytical Methods.* MOC's comments are followed by recommendations typed in italics. MOC respectfully requests that BLM consider and respond to the comments contained herein, as well as the recommendations.

NEPA PROCESS

In 1969, Congress passed the National Environmental Policy Act (NEPA). The Act declares that "it is the continuing policy of the Federal Government, in cooperation with state and local governments, and other concerned and private organizations, to use all practicable means and measures, including financial and technical assistance, in a manner calculated to *foster and promote the general welfare, to create and maintain conditions under which man and nature can exist in productive harmony, and fulfill the social, economic, and other requirements of present and future generations of Americans.*" (Emphasis mine). This is the NEPA 'purpose', the cornerstone of NEPA as stated in §101(b) of the Act.

The purpose of NEPA was to establish basic principles regarding action affecting the environment, reinforce this mandate with action-forcing procedures, and to establish a statutory council (Council on Environmental Quality) to oversee implementation. In §102(2)(c) of the Act the foundation for impacts assessment is laid. This section of the regulations defines the NEPA 'process'. The fundamental objective of impact assessment is a better-informed, coordinated, and more rational decision-making process. Paradoxically, the EIS, intended to force action on the substantive provisions of the ACT, has become, in the minds of many, the essence of the Act itself. The EIS has misdirected attention from the purpose and principles of NEPA, and has lead to the belief among some that the Act is essentially procedural. Environmental organizations have discovered that the EIS provision in NEPA enables them to block, complicate, or force revision of federal actions they oppose.

Federal agencies, including BLM, must remain constantly vigilant for the misuse of the NEPA process to achieve narrowly held objectives. BLM must not put process over purpose. The NEPA process is more than writing and reviewing an impact statement. The NEPA process should provide the means for improving the substance, economy, efficiency, and effectiveness of projects administered on public lands. BLM required this EIS before an understanding of the complex reservoir characteristics was obtained and coincidentally declared a drilling moratorium based on unsubstantiated concerns over "well counts". These decisions do not represent the essence of the NEPA purpose. This is clearly process over purpose. 1

In responding to this comment, we are sure that BLM will cite §1501.2(d) of the NEPA regulations pertaining to the early application of NEPA. This section of the 2

regulations states that agencies are required to provide for the early application of NEPA to "cases where actions are planned by private applicants or non-Federal entities and are, at some stage, subject to federal approval of permits, loans, loan guarantees, insurance or some other actions." (CEQ's Forty Most Asked Questions Concerning CEQ's National Environmental Policy Act Regulations printed in FR Vol. 46, No. 55, 18026-18038, 3/23/81). Certainly BLM has fulfilled its obligations under this section of the regulations. It did so when it conducted a leasing analysis for these lands, and subsequently when it conducted and issued the Resource Management Plan EIS and ROD. The activity currently under scrutiny in this EIS has had an early application of NEPA, and should not have required additional analysis until there was verifiable, realistic operator-identified development proposal. 2

RECOMMENDATION: As NEPA requires, BLM should invite, foster, facilitate, and seriously consider all public input. However, BLM should not put process before purpose and abdicate its role as the decision maker with regard to federal actions. Public concern should NOT be the sole basis for BLM decisions. Public concern should be considered equally with all other relevant information. Consensus-based decisions are those that all parties feel they can support, not a one-sided decision such as was made to require this EIS and declare a drilling moratorium. MOC recognizes that this decision cannot now be reversed. A challenge, therefore, is issued to BLM to conduct a thorough and unbiased analysis of the impacts of the project elements. BLM must strive to reach a decision that improves the substance, economy, efficiency, and effectiveness of the management of the Pinedale Anticline project, and that can be supported by all entities involved in the process.

The CEQ regulations and the case law have clearly established that BLM only need study "reasonable" alternatives (40 CFR §1502.14(a); Coalition for Canyon Preservation v. Bowers, 632 F.2d 774, 783 (9th Cir. 1980). The test of reasonableness is discussed in CEQ's Forty Most Asked Questions Concerning CEQ's National Environmental Policy Act Regulations printed in FR Vol. 46, No. 55, 18026-18038, 3/23/81. The answer to question 2a states, "Reasonable alternatives include those that are practical or feasible from the technical and economic standpoint and using common sense, rather than simply desirable..."(Emphasis mine).

RECOMMENDATION: It is irrefutable that the proponents of the action have the best data to assist the BLM in determining the technical and economic feasibility of potential alternatives for analysis. However, in developing the DEIS, the BLM has categorically ignored the operator's input regarding the feasibility of the BLM alternatives that have been analyzed in the PAEIS, except in instances where the mitigation in question was proposed by one operator. BLM should involve the all of the proponents in ascertaining the technical and economic 3

feasibility and reasonableness of the alternatives and mitigation that BLM selects to analyze in the EIS. 3

MOC believes BLM has erred in disregarding previous operator-submitted comments regarding the technical and economic feasibility of alternatives. Apparently, BLM's justification for disregarding operator input is the notion that the operators, as proponents of the action, are afforded no different a level of involvement than the general public. The CEQ regulations clearly do not support this sentiment. 40 CFR §1501.4(b) states that "the agency shall involve environmental agencies, *applicants,* and the public, to the extent practicable, in preparing assessments required by §1508.9(a)(1)." (Emphasis added). 40 CFR §1501.7(a)(1) says as part of the scoping process "the lead agency shall ...(i)nvite the participation of affected Federal, State and local agencies, any affected Indian tribe, *the proponent of the action,* and other interested persons..." (Emphasis added). 40 CFR §1503.1(a)(3) states that when inviting comments, the agency shall "Request comments from the applicant, if any." In contrast, 40 CFR §1503.1(a)(4) states that the agency shall "Request comments from the public..." Clearly the CEQ regulations make a distinction between the applicant/proponent of the action, the general public and other interested and affected parties. Unfortunately for everyone involved, the BLM personnel involved with the development of this DEIS have chosen to disregard the operators comments and have analyzed alternatives that MOC believes will ultimately be shown to be not reasonable, either technically or economically. 4

RECOMMENDATION: MOC recommends that BLM personnel (at the very least) consider the proponents discussion of the feasibility of the range of alternatives proposed for analysis in the EIS. After all, when the decision is made and project development begins, it will be the project proponents and the BLM who must implement and abide by that decision. This fact alone exemplifies the point that proponents of an action should be afforded a higher level of participation in the NEPA process. MOC contends that if BLM had accepted the operator's input, the DEIS could have been more expeditiously completed, and that the range of alternatives analyzed in the DEIS would have reflected a more realistic scenario. Additionally, as pointed out by the GRBAC report, BLM would have fewer comments to respond to.

BLM should assure that the EIS "shall be analytic rather than encyclopedic"; that potential impacts "should be discussed in proportion to their significance"; the EIS "shall be kept concise and shall be no longer than necessary to comply with NEPA and these regulations"; (at 40 CFR §1502.2(a), (b), and (c)). The CEQ regulations further state that BLM should, to the fullest extent possible, "Implement procedures to make NEPA more useful to decisionmakers (sic) and the public; to reduce paperwork and the accumulation of extraneous background data; and to emphasize real environmental issues and alternatives. Environmental impact statements shall be concise, clear, and to the point, and shall be supported by evidence that agencies have made the necessary

environmental analyses." (40 CFR §1500.2(b)). Further, it is stated at 40 CFR §1502.7 "The text of final environmental impact statements ...shall normally be less than 150 pages and for proposals of unusual scope or complexity shall normally be less than 300 pages."

MOC respectfully submits that the PA EIS (at well over 500 pages, plus roughly the same number of pages in technical support documents) certainly qualifies as encyclopedic. BLM has failed to keep the document concise, predominantly because the agency has not discussed potential impacts in proportion to their significance. 5

RECOMMENDATION: MOC implores the BLM to follow NEPA and strive to keep the PAFEIS to a manageable length, as required, to between 150 and 300 pages. 6

Omissions and Corrections

CEQ regulations state that the EIS should "serve as a means of assessing the environmental impact of proposed agency action, rather than justifying decisions already made" (at 40 CFR §1502.2(g)). A most disturbing observation is that BLM repeatedly makes pre-decisional statements in the PADEIS that certainly lead the reader to a conclusion that it serves the purpose of justifying decisions already made. These types of statements are enumerated below. They are in direct contradiction to NEPA, which states, "An environmental impact statement is more than a disclosure document. It shall be used by Federal officials in conjunction with other relevant material to plan actions and *make decisions."* (At 40 CFR §1502.1, emphasis added).

RECOMMENDATION: MOC submits that the PAEIS is not a decision document and all statements contrary to the NEPA regulations should be removed (see below).

Statements suggested for revision with regard to their 'pre-decisional' content are listed below:

All Alternatives: Pre-decisional Comments with emphasis added:

Executive Summary – 2, 7th paragraph: Speeding is already a problem in the PAPA and *safety concerns associated with excessive speeds will need to be addressed.* Constant vigilance by the operators will be required to assure that roads are adequately maintained and the interests of the traveling public are protected. 7

Executive Summary – 3, 1st paragraph: Where the minerals under these areas are Federally owned, *BLM would avoid placement* of wells within 0.25 miles of occupied structures. 8

Executive Summary – 3, 1st paragraph: To avoid significant impacts from noise, *wells would need to be located* at least 800 feet from residences. 9

Executive Summary – 4, 8th paragraph: Also, unleased Federal minerals along the Wind River Front and Gros Ventre foothills, where high recreation use, subdivisions, crucial wildlife habitat, high visual sensitivity, and other values, *need reevaluation* before a determination can be made as to their suitability for lease. *In response to this concern, the BLM Wyoming State Director has concurred in the withholding from oil and gas leasing of these Federal minerals until the effects of leasing these lands can be addressed in a revision to the 1988 BLM Pinedale RMP and the Bridger-Teton Leasing EIS.* 10

Page 2-17, 1st paragraph: *Potential well pad locations which would not be allowed to be developed* without an exception from BLM are identified as "ELIMINATE WELL PAD" in attachment A of the technical report. If the operators intend to develop the reserves under these spots, *directional drilling would have to be used because surface disturbance within the restricted area would not be allowed.* 11

Page 4-65, §4.9.3.2: BLM, who is responsible for managing the trail on Federal lands, *does not agree with NPS/LDTO's conclusion* regarding the management plan's ranking of the trail through the PAPA. 12

Page 5-6, 1st paragraph: ... but on-the-ground *VRM management in these and other visually sensitive areas need to be re-evaluated. The current VRM classifications are over 10 years old and need to be updated to reflect changing development patters and recreational needs of the residents within the field area.* 13

Page 5-13, 2nd paragraph: *The BLM Pinedale Field Office should begin preparation of a Wind River Front SRMA Plan* to complement the plan prepared by the Green River Field Office. That plan should evaluate realistic mechanisms for managing conflict between mineral development and recreation and other uses. Although a number of mitigation opportunities are included in the Green River RMP (i.e., pad drilling, developing only certain portions of the SRMA, etc.), *the plan should be expanded for the RMP area to identify areas where oil and gas leasing should not occur to protect significant recreation resources. For instance, the current restriction of 0.25 miles to protect developed recreation sites should be reevaluated* in recognition of the topography and setting of a number of the recreation resources in the Wind River Front. *Allowing development within 0.25 miles of certain types of recreation sites may still result in a significant impact to the recreation user.* 14

Page 5-14, 1st paragraph: *The 1988 VRM classifications are seriously outdated and will only get more difficult to update as additional leases are granted and residential areas develop. The Lander Trail should be considered when updating the VRM classifications.* It may be appropriate to evaluate viewsheds associated with the trail and develop strategies for reducing impacts to the trail's setting from development of adjacent leases. *The VRM update should also consider and predict, with the assistance of Sublette County, where residential development in the RMP area is likely to occur.* Maintaining visual integrity from areas designated for primarily residential use by Sublette County should be considered. *When the VRM classifications are revised, oil and gas leasing should not occur in* 15

any areas designated as VRM Class I or II or of it does it should be with NOS or other appropriate stipulations. Additional methods to protect other important viewsheds should be developed by BLM and incorporated into leases. Implementation of the project would substantially alter the existing landscape regardless of VRM classification. 15

Pages 5-14 & 5-15, 6th & 1st paragraph: *Oil and gas development in the vicinity of the Lander Trail will continue to be problematic in the RMP area for both the BLM and oil and gas lessees. BLM should evaluate future leases adjacent to these trail segments and apply NSO stipulations where the setting of the trail could be adversely affected.* To continue to issue leases with only a 0.25 mile protective buffer in areas where additional protection is warranted s problematic for both the lessee and the BLM. In addition to the problem associated with the trail on Federal lands and minerals, *the State of Wyoming should decide what level of protection is adequate for the trail on state lands and minerals.* Currently the state does not apply any restrictions to development on or near historic trails. *This policy should be revisited.* It is inconsistent for the Wyoming State Historic Preservation Office to recommend significant indirect impact reductions on Federal lands while that agency remains powerless to reduce direct impacts to the trail on state lands. 16

RECOMMENDATION: BLM must make a diligent effort to filter out of the PADEIS any statements such as those listed above. BLM must remain objective in its analysis and decision-making. BLM cannot make decisions with regard to new stipulations or classifications and simply 'announce' them in the PADEIS or PAFEIS. That is a contravention of the purpose and requirements of NEPA. BLM must also strive to remove all statements that show a particular bias, such as words to the effect that oil and gas development is an unacceptable land use. MOC has not listed all of these references for the sake of some brevity, but they have been previously pointed out to BLM. 17

All Alternatives: Omissions and Typographical Errors:

The following list includes some of the typographical errors and omissions noted in the PADEIS:

Executive Summary – 1, 3rd paragraph: All but 7.4 square miles of the Federal minerals in the project area had been leased.
Executive Summary - 3, 3rd paragraph: If development is extensive adjacent to town, impacts to local recreation use could be significant and it is likely that users would choose to avoid these areas.
Executive Summary – 4, 5th paragraph: ... black-footed ferret, bald eagle, mountain plover, and Canada lynx.
Executive Summary – 4, 5th paragraph: However, water depletions associated with the project implementation "may affect" Colorado River endangered fish. No T/E plant ...

Executive Summary – 4, 8th paragraph: ... need reevaluation before a determination can be made as to their suitability for the lease. In response ...
Page 1-2, 3rd paragraph: The extent and nature of future development of gas reserves in the PAPA is unknown and during...
Page 1-3, 1st paragraph: The No Action Exploration/Development Scenario is also addressed in this EIS.
Page 1-6, 6th paragraph: ... stimulate the health and welfare of (long space) man."
Page 2-6, 4th paragraph: ... additional development activities would trigger (long space) supplemental analysis of impacts.
Page 2-48, 1st paragraph: ... (no new paragraph) this option would centralize at one location production equipment commonly found at each well pad.
Page 3-6, Table 3-3: Natural Gas Production (MCF) in Sublette County – 1981-1997
Page 3-23, 1st paragraph: Because of the accessibility to Pinedale, the Mesa has historically been a popular area for viewing deer in the winter.
Page 3-23, 4th paragraph: There are 2 developed WGFD river access sites in the project area.
Page 3-26, 1st paragraph: ... interpretive turnout and signing, on the way to the parks *(what parks?),* the trail could attract significant use.
Page 4-22, 1st full paragraph: ... (see Section 4.4.4). *Incorrect reference*
Page 4-43, Section 4.7.3.1: Studies of workers on oil and gas projects have found that the immigrant workforce typically participated ...
Page 4-43, Section 4.7.3.1: The potential exists that immigrant workers associated with the project may impact recreation resources by parking overnight...

RECOMMENDATION: BLM should correct and/or clarify these errors, as well as any others noted in comments. 18

ALTERNATIVES AND ANALYTICAL METHODS

All Alternatives: Sales Pipeline Route Additions

MOC requests that BLM include two additional segments of sales pipeline that avoid the congestion in the vicinity of Jonah Field. These routes are identified as "Pinedale Loop" and "Antelope Loop" on the attached Jonah Field Map. The purpose and need for these routes is to carry gas that may be produced from the Pinedale Anticline project area and deliver it for processing and sales. The PADEIS currently analyzes additional disturbance along the existing pipeline corridor. This corridor extends from the northern reaches of the PAPA, through Jonah Field to both the Granger and Opal processing facilities. The need to avoid the heart of Jonah Field is essentially a safety issue. The existing pipeline corridors in Jonah Field have become crowded and now contain more than 150 well interconnects. In order to construct a new pipeline through this congested 19

area, every interconnect would have to be completely excavated, and the new pipeline installed around or under existing piping. As existing piping would be under pressure and would contain hydrocarbon gases, there exists a significant concern with regard to the safety of the construction workers. Therefore, MOC has identified alternative routes that avoid these safety concerns. While BLM typically prefers pipelines to follow existing roads, this has become very impractical within the Jonah Field. These proposed routes are generalized and they follow existing disturbances as much as possible. They are believed to avoid most known surface resource concerns. Final routes will be determined in cooperation with BLM resource specialists to ideally locate the pipelines when applications for rights-of-ways are submitted.

19

All Alternatives: Levels of Compression Identified and Analyzed:

Recent EIS' conducted by BLM in southwest Wyoming have become increasingly restrictive with regard to analyzed levels of compression. This has created an opportunity for some companies to attempt to establish a competitive advantage through the permitting process. For instance, a hypothetical analysis would disclose the impacts of a certain level of compression emissions. A company might then attempt to permit all of the analyzed level of compression for itself. BLM may find itself in a position where it does not believe it can authorize compression beyond the level analyzed. This creates extreme hardship for other, competing companies who are then potentially forced to choose between "doing business" with the company who now holds the 'rights' to all of the analyzed horsepower; and conducting additional air quality impacts assessment and NEPA analysis so that they may fulfill contractual gathering obligations.

MOC is very concerned that just such a situation may develop with regard to the PAPA, as at it did at Jonah Field. All potential gathering companies were ostensibly asked by the representative of the lead operator if they had gathering needs that they wanted identified and analyzed in the PAPA. As discussed in several places in the PADEIS, Jonah Gas Gathering Company (JGGC), a Wyoming partnership operated by MOC, and Western Gas Resources identified potential sales pipeline routes and anticipated compression needs and potential locations of compressor stations. All told, the PADEIS has analyzed the impacts from 26,000 horsepower of compression to be located at one or more of five potential compressor station locations. The compressor needs and station locations identified by JGGC were based on existing contractual obligations, existing gathering infrastructure, and anticipated volumes of hydrocarbon gas from the lands within project area that JGGC was under obligation to gather gas from.

20

Since that time, subsequent to the completion of the air quality analysis for the PAPA, another company has had discussions with BLM with regard to *additional* pipeline and compression needs, and has recently notified JGGC personnel that permit applications have been filed for 27,000 horsepower at three compressor station locations to transport gas from the project area. MOC does not dispute other company's rights to gather and transport gas from the PAPA, or their right to build the necessary facilities to fulfill their contractual obligations. MOC does object to one company employing permitting tactics that will essentially 'lock up' the entire compressor emission level analyzed in the PAPA, especially after that company did not identify any need for pipelines or compression to be analyzed in this document.

RECOMMENDATION: BLM must address this issue. The overly prescriptive application of NEPA analyses to BLM rights-of-way grants has created the problem. BLM must recognize and acknowledge that it does not have authority to regulate air quality issues. The newly identified compression needs must not be considered as having been included in the existing analysis. If it is, based on past experience with similar situations, MOC believes that the companies that identified needs early-on in the process will be forced to conduct additional analyses and experience significant delay and additional expense to meet their contractual obligations. This would be unfair and punitive to the companies that participated in the process from the beginning and may now find themselves at a competitive disadvantage.

20

All Alternatives: Wildlife Significance Criteria and Modeling

BLM has failed to adequately provide a Biological Assessment (BA) for this project. BLM has failed to adequately address the likely impacts to T&E species and their habitats within the project area. On page 4-119 of the PADEIS BLM states that the BA is "incorporated into this EIS." This is atypical to the USFWS requirements for determining likely impacts to T&E or candidate species.

21

MOC submits that BLM has erroneously concluded that direct impacts to wildlife from this project will be significant and therefore must be mitigated. This error has occurred through the use of subjective and artificially low significance criteria. BLM has reached this conclusion even after admitting that secondary impacts from other, non-project related activities could and do have the exact same level of impacts to wildlife.

BLM has subjectively chosen three significance criteria for impacts to wildlife (PADEIS at §4.19.2, page 4-144). Should these significance criteria be applied to ANY of the actions of man within the project area, the obvious conclusion would be the same as is reached in the document. In fact, the PADEIS acknowledges this fact where it is stated that non-project-related, "secondary impacts" from increased recreation; increased habitat conversion from urban/suburban sprawl; habitat degradation by human encroachment; increased noise, air, and water pollution; increased game poaching; increased wildlife road kills; and increased harassment of wildlife by uncontrolled pets, especially dogs can also result in an exceedance of the significance criteria (PADEIS at §4.19.3.1, page 4-144).

22

BLM has incorporated an analysis of "pad drilling" and centralized production facilities into both RPAs. BLM has failed to adequately substantiate the inferred expectation of significant impacts on wildlife that would lead the agency to consider and implement such extreme measures.

23

MOC believes BLM has mistakenly applied an unverified, non-peer reviewed model to assess impacts to wildlife habitat. Additionally, BLM has failed in providing stakeholder input into this modeling effort as recommended by GRBAC and as provided for in all other modeling efforts, such as air quality related impacts modeling. This is acknowledged in the write-up where it is stated: "The models described here need to be reviewed by wildlife authorities to determine if weak or questionable components could be improved (USFWS 1981). Key criteria for any successful model include biological realism... some degree of precision... and some means of validation." (Page 36, PADEIS, Wildlife Technical Report) As a result of the predictable output from this model, BLM has analyzed, and may select, extreme mitigation measures that are clear violations of the lessee's rights without providing any mechanism to ground-truth model assumptions or techniques.

24

The analysis of sage grouse lek attendance and distance from oil and gas activity is incomplete and misleading. Only a single variable was measured (distance). Other variables, such as line-of-sight distance, intensity of human activity, predator densities, vegetation type, population trend of sage grouse populations in the analysis areas, etc, need to be included before any conclusions regarding the potential effects of noise can be made. Once again, the PADEIS acknowledges this deficiency: "Noise associated with oil and gas development operations *may* adversely affect sage grouse reproduction by interfering with auditory stimuli during courtship (see Chapter 4) but *additional research is necessary before such impact is known with certainty."* (§5.18, PADEIS, page 5-34) (Emphasis mine).

25

The application of this model, which is based on assumptions, conjecture, and inference (Table 4-45, at pages 4-121 and 4-122 PADEIS) is not contributing to the state of knowledge about impacts to fish and wildlife due to natural gas development. Instead of being part of a solution, use of this model is contributing to the ongoing problem and limiting factor of not having adequate field data and research upon which to base analyses.

Conversely however, the proponents are funding studies that the BLM declares "extremely beneficial" (at page 2-53 PADEIS). Objectively gathering data is the real solution to this paucity of defensible theory about impacts to wildlife. On page 2-53 of the PADEIS it is stated, "In addition, the operators have funded other programs that will reduce or allow better understanding of impacts from project-related activities." "These wildlife studies, if funded long-term, have the potential of answering a number of questions that will help in better understanding wildlife interaction with oil and gas development." Instead of

26

proposing and analyzing multi-million dollar mitigation that has no proven results and violates the lessee's rights, why hasn't BLM analyzed long-term Federal funding of these ongoing research projects so that impacts can be truly understood and properly mitigated?

26

The following statements are made in the Wildlife Technical Report: "The data do not conclusively identify decreased fawn productivity as a result of oil/gas developments within affected herd units." (PADEIS, Wildlife Technical Report, at pages 64 and 67). These observations raise more questions than they answer." (PADEIS, Wildlife Technical Report, at pages 67 and 70). "The situation warrants much closer investigation before cumulative effects due to oil and gas developments and other land uses on pronghorn populations can be predicted." (PADEIS, Wildlife Technical Report, at page 67).

The investigators seem puzzled that years of pre- and post-oil and gas development data fail to demonstrate that fawn production in ungulate populations were impacted by the advent of oil and gas development. The PADEIS wildlife analysis ignores the obvious possibility that oil and gas development has not negatively affected fawn production. Based on the data analyzed, it appears that the obvious conclusion is that fawn production has remained high in these studies, in spite of oil and gas development. In fact on page 5-30 of the PADEIS, it is stated: "The data do not conclusively identify decreased fawn production as a result of oil and gas developments within affected herd units: (sic) there are other factors influencing fawn productivity as well, principally winter precipitation, but also population size (density-dependent reproduction), availability and nutritional value of forage, availability of water and competition with other herbivores." (PADEIS, page 5-30).

27

Certainly, significant doubt as to the validity of this analysis is created by the fact that BLM ignored all of these other contributing factors when determining impacts to wildlife from project-related activity. In fact the only conclusion reached in the document that is valid with regard to factors influencing habitat function is found on page 5-33 where BLM states: "For whatever reason(s), habitat functions of crucial and non-crucial winter ranges in these mule deer herd units do not appear to be as effective as they were in the early 1980's." This is a clear acknowledgement that there is a complete lack of understanding with regard to cause and effect relationships and the viability of ungulate populations.

This model is an unproven technique that has not been field validated. Application of this model is not an appropriate vehicle for the assessment of impacts in a critical, real-world circumstance where the analytical outcome will substantially affect both the petroleum industry as well as the wildlife populations. It should first be tested under purely research conditions where the outcome isn't going to impact, perhaps adversely, both people and animals. This contention is at least acknowledged in the model write-up, where it is stated: "Clearly, these wildlife habitat models are a first step relating wildlife habitat attributes to

28

environmental impacts and should be viewed as working hypotheses, not as definitive solutions to the problem of cumulative impact assessment. As such, they will undoubtedly require revision, refinement, and we hope will be improved in the future through critical and constructive review by other interested wildlife biologists and field validation, a desirable and necessary step in any modeling process (Morrison et al; Conroy, 1993)." (at page 13 of Wildlife Technical Report, PADEIS).

28

The model is incomplete as acknowledged in Section D, on page 12 where it is stated: "There may be other habitat conditions that have not been included because data were not available for use in GIS analysis or the conditions could not be transformed for suitable analysis even though their inclusion might provide more realism."

29

In the Expanded Moxa Arch Area EIS, the only other EIS conducted in Wyoming (that MOC is aware of) where this model technique has been employed, the WYG&FD commented with regard to analysis methods (i.e. this model): "The current analysis is largely based on opinions, which fail to support its conclusions." (Final Environmental Impact Statement Expanded Moxa Arch Area Natural Gas Development Project, June 1995, page 4-26.)

30

The BLM acknowledges a very important point on page 1 of the Wildlife Technical Report with regard to documented or implied impacts from the project: "These do not include effects of natural gas developments on *species populations*; *none have been studied or documented* and hence the emphasis of impact analyses continues to be on wildlife habitat." (Emphasis mine) Clearly, BLM has failed to establish a cause and effect relationship with regard to habitat function, as documented previously. It is the goal of mitigation to ensure the long-term viability of a species, not try to mitigate impacts to individual members of a species, or protect some singular component of wildlife habitat without understanding its importance. BLM will have erred if the ROD requires such far-reaching and costly mitigation, such as "pad" drilling, rig limitations, and centralized production facilities without even analyzing what the effects of natural gas development are on species population viability.

31

The wildlife model utilizes a Bayesian analysis of impacts to wildlife habitat. According to published literature, Bayesian analysis is a statistical model typically utilized as a methodological tool for data analysis, knowledge discovery, and machine learning A crucial aspect of Bayesian methods is to regard probability mass function as a random quantity whose prior density is known, before seeing the data. The prior distribution can arise from data previously observed, or it can be a subjective assessment of some "expert'. (Bayesian Methods for Intelligent Data Analysis, M. Ramoni and P. Sebastiani, July 1998).

The available information changes as new data are observed, and so does the conditional distribution of probability mass function. Bayes' Theorem is used to conduct this revision of the conditional distribution of probability mass function. This results in an 'update' of the prior density into the posterior density as the amount of information changes. The end result is that regarding probability mass function as a random quantity gives Bayesian analysis the ability to incorporate exogenous information into the inferential process so that the posterior distribution of probability mass function is conditional on the total information available. (Bayesian Methods for Intelligent Data Analysis, M. Ramoni and P. Sebastiani, July 1998).

This explanation of the use of Bayesian analysis becomes important with regard to the PAEIS in that the prior probabilities, both prior and conditional are admittedly subjective estimates (Tables 1.D-1, 1.D-2, and 1.D-3, at pages17, 20, and 22 of the Wildlife Technical Report, PADEIS). Changing these values would give very different values for the posterior probabilities. Posterior probabilities are used to measure the "effect" of development and are the basis for the BLM's determination to require mitigation.

The model is based on a great many subjective and unproven assumptions and theory. These assumptions are exactly the type of analysis that the report criticizes: "The state of knowledge about impacts to fish and wildlife due to natural gas development is meager and has not substantially progressed during the past twenty years." "...NEPA practitioners base impact evaluations on assumption, conjecture, and inference derived from studies of similar types of actions but in diverse locations and on different but similar species." (at page 1 of Wildlife Technical Report, PADEIS).

32

Importantly, the BLM has relied on unsubstantiated prior probabilities to generate the posterior probabilities. BLM has made a procedural error in the application of this model when it did not conduct a sensitivity analysis of the values of the prior and conditional probabilities on the posterior probabilities. BLM should have assigned a distribution to each of the prior and conditional probabilities and then routed these through the Bayesian analysis to get a distribution of posterior probabilities. A stakeholder group consisting of wildlife biologists and Bayes' Theorem experts should have assigned these prior and conditional distributions. The posterior probabilities as they are set forth in the PADEIS are inappropriate in that they do not flow from standard Bayesian analysis techniques.

BLM has assumed that the conditional probabilities are independent in a probabilistic sense. This assumption allows them to multiply probabilities in the lengthy equations on pages 23, 27, and 30 of the Wildlife Technical Report, PADEIS. BLM does not justify this assumption of independence, and making the assumption has a large influence on posterior probabilities. For example, the probability of being a female civil engineer is not necessarily the product of the probability of being a female and the probability of being a civil engineer.

33

Conversely BLM acknowledges the importance of the interrelationships of these conditional probabilities elsewhere: "Adequate information is not currently available to effectively assess the synergistic effects of development on wildlife. It is very difficult to measure and assess interactive impacts to any ecosystem because of limited understanding and debate regarding how components of a given ecosystem interrelate." (Final Environmental Impact Statement Expanded Moxa Arch Area Natural Gas Development Project, June 1995, page 5-24.)

34

BLM reaches an obvious conclusion: "The analyses clearly reveal that existing and projected land use changes will decrease functional habitat for the three wildlife species considered." (at page 36 of the Wildlife Technical Report, PADEIS). Clearly, a model isn't required to predict that, without efforts to reclaim or replace it, habitat disruption and destruction by any means will "decrease functional habitat". BLM reaches another germane point when it states: "The results (of this model) beg the questions of wildlife and land managers of whether there has already been or will be too much loss of suitable habitat..." "...and if so, what mitigation efforts would be necessary and where they should be implemented to restore affected habitats." The application of this model, by BLM's own admission, does not answer these questions; it simply "begs" them. Therefore BLM has made a serious error in basing mitigation requirements on the model.

35

RECOMMENDATION: Do not use model output to base mitigation decisions upon. They will be arbitrary and capricious. BLM must address the inadequacies, if any, of the existing mitigation and lease stipulations already imposed on the PAPA. It is not at all clear from the analysis presented, especially in light of the concerns with the wildlife habitat impacts model discussed above, that the Standard Stipulations Alternative does not adequately protect wildlife resources in the PAPA.

36

Resource Protection Alternatives: Pad or Directional Drilling and Centralized Production Facilities

MOC incorporates by reference the letter from Ms. Marilyn Kite to BLM dated January 12, 1999 that enumerates the problems with the provisions of the then-contemplated stipulations with regard to directional drilling in the PAPA. BLM is hereby respectfully requested to respond in detail to the issue presented therein the takings of lessee's rights.

37

BLM cites an appeal in support of its contention that it has the right to regulate the manner and pace of development. Interestingly, this appeal also considered a challenge to BLM for not requiring directional drilling on this particular project. BLM does not reference this portion of the IBLA response to the appeal. IBLA states in its decision that "BLM concluded that directional drilling was not a reasonable alternative since it was uneconomic and infeasible. It explained that, since neither project area is an established production area where the characteristics of the natural gas reservoir are known and well-defined, the proposed drilling is intended to delineate the reservoir and its production capabilities, and ultimately determine whether there is, in fact, a reasonable chance it can be successfully produced by full field development. BLM noted that directional drilling could not, from a technological and an economic standpoint, reasonably accomplish that particular purpose, owing to the great distance between the wells to be drilled." This point directly applies to this project as well. Clearly, the PAPA is not an established productive area where the characteristics of the reservoir are well known and defined. BLM admits this repeatedly throughout the document, especially in Chapter 2. BLM should anticipate a similar response from IBLA should the ROD for the PAEIS project require a blanket mitigation that forces directional drilling.

38

38

BLM necessarily forgets to state the obvious conclusion in the PADEIS, that is, waste will occur if the operators are unilaterally forced to directionally drill wells. However, Appendix B of the PADEIS does clearly analyze pad drilling on both 40 and 80-acre downhole spacing scenarios. The conclusions reached in that analysis, while not quoted in the PADEIS, clearly indicate that a huge waste of the natural resource would occur should BLM enact this alternative.

39

While in agreement with the conclusions reached in this analysis, MOC believes that the analysis in Appendix B is incomplete and overly conservative. MOC hereby incorporates by reference the specific comments made by Anschutz with regard to re-calculations of the economics of pad drilling. In either analysis, it becomes obvious why BLM cannot select this alternative. In the Executive Summary, BLM states, "Most directional wells needed to reach an 80-acre spacing are not expected to be economic at today's gas prices. Directional wells needed to reach a 40-acre spacing would be uneconomic." (at page 1, Appendix B, PADEIS). Of course, even in this analysis BLM steadfastly avoids stating the obvious conclusion. If wells are uneconomic, operators will not invest the considerable funds required to drill and complete them. The natural resource will be wasted.

40

Further, the BLM Reservoir Management Group states some of the impacts of not drilling directional wells because they are uneconomic. "Hydrocarbons would not be recovered, royalty would be lost and maximum economic recovery of the resource would not be possible if additional drilling pads could not be allowed." The authors continue on to declare that from one half to three fourths of the hydrocarbons in that area would be lost. This constitutes an inarguable illegal taking of lessee's rights. BLM has erred in not analyzing and disclosing to the public the socioeconomic impacts of this projected loss of revenue.

41

The following list contains the specific sections of Appendix B that MOC would appreciate BLM addressing:

Pages 1, 4, and 6: BLM reaches a conclusion that geologic risk does not preclude directional drilling. Yet BLM states on page 5: "The reservoir beneath the Pinedale Anticline is broken into small producing blocks or compartments due to the lenticular nature of the individual sandstone bodies, their low permeability, and faulting." While geologic risk may not *preclude* directional drilling, it certainly does complicate it. 42

Page 2: BLM needs to include the acknowledged increased mechanical risk in their economic analysis. BLM simply states that "We should recognize that problems which occur during directional drilling may significantly increase cost and the risk of losing the entire wellbore." This statement ignores the analysis of the economic impacts of these inherent difficulties. 43

One very crucial piece of information that BLM must address in this analysis is the estimated ultimate recoveries of the wells drilled so far on the Anticline. According to McMurry Oil Company analysis, few of the wells drilled to date for which information is available would have been economic to drill directionally. Therefore, if BLM would have required the operators to drill these wells directionally, and the reserves of the wells could be accurately determined prior to drilling, very few of these wells would have been drilled, certainly leading to waste, and a taking. 44

PAD DRILLING DISCUSSION

BLM has proposed a Resource Protection Alternative for the Pinedale Anticline EIS that requires a well pad density of no more than an average of four per square mile over approximately 60% of the project area. The following discussion lists McMurry Oil Company's concerns with the concept of pad drilling in the Pinedale Anticline Project Area. These concerns are:

- Pad drilling does not significantly reduce short or long-term disturbance as compared to vertical wells.
- Directional drilling requires significantly longer drilling time than vertical wells, increasing drilling-related impacts.
- If directional wells are not "s"-shaped, significant reserves will be irretrievably lost.
- Drilling "s"-shaped wellbores significantly increases cost and mechanical risk as compared to vertical wells.
- If "s"-shaped wells are required to be drilled, fewer wells will be drilled resulting in irretrievably lost reserves.
- At a minimum, any requirement for directional drilling results in a delay of tax and royalty payments to the federal government.

INTRODUCTION:

As a means to avoid potentially adverse biological and visual impacts and reduce surface disturbance, the BLM has suggested an average density of one well pad every 160 acres in portions of the Pinedale Anticline EIS Project Area. If more than one well per 160 acres is required to efficiently recover the gas resource in the Pinedale Anticline Project Area, directional drilling of multiple wells from a single well pad will be required. Additionally, centralized production facilities have been suggested as part of BLM's Resource Protection Alternative for the Pinedale Anticline EIS Project Area. The following discussion is intended to list McMurry Oil Company's concerns with the proposal to potentially require directional drilling and centralized production facilities in the study area.

The regulations and guidance regarding this issue are clear. According to 43 CFR §3162.1(a): "The operating rights owner or operator, as appropriate, shall comply with applicable laws and regulations; with the lease terms, Onshore Oil and Gas Orders, NTLs; and with other orders and instructions of the authorized officer. These include, but are not limited to, conducting all operations in a manner which ensures the proper handling, measurement, disposition, and site security of leasehold production; which protects life and property; and which results *in maximum economic recovery of oil and gas with minimum waste and with minimum adverse effect on ultimate recovery of other mineral resources."* (Emphasis mine)

According to 43 CFR §3162.5-1(a): "The operator shall conduct operations in a manner which protects *the mineral resources*, other natural resources, and environmental quality." (Emphasis mine)

It is stated in 43 CFR §3162.5-1(b) that: "The operator shall exercise due care and diligence to assure that leasehold operations do not result in *undue damage to surface or subsurface resources or surface improvements."* (Emphasis mine)

In the Council on Environmental Quality's "Forty Most Asked Questions" memo appearing at 46 Federal Register 18026 (1981) it is stated that: "Reasonable alternatives include those that are practical or feasible from the *technical and economic standpoint* and using common sense, rather than simply desirable from the standpoint of the applicant." (Emphasis mine)

It becomes clear when reading these portions of the regulations and guidance that BLM's highest priority and first directive is to maximize recovery and avoid the waste of the public's mineral resource estate, such as natural gas and condensate. Obviously, BLM should maximize economic recovery while preventing *to the extent possible* undue damage to other resources.

With that in mind, the following discussion of the pad density and consolidated facility issues has been prepared. First, BLM must show through their analysis that undue damage to other resources will occur if well density is not limited to four per square mile, or production facilities are not centralized. Secondly, the BLM's own review has led to the conclusion that pad drilling would not result in the maximum economic recovery of oil and gas or minimize impacts and would, in fact, have the opposite effect (Appendix B, PADEIS). 45

BLM should make every attempt to minimize surface disturbances where undue impacts are determined to exist, but *always* strive to allow first for maximization of the economic recovery of the mineral resource, and at the very least ensure that lessee's rights are not violated. That is a legal obligation, not a choice.

46

HISTORY

Directional drilling has been used in the Pinedale Anticline Project Area in the past with limited success. There were two wells directionally drilled in the project area in 1998. The Ultra 3-22D encountered significant drilling and completion problems. Because of these problems associated with the directional drilling, this well cost a total of $3,200,000 to drill and complete. This cost represents an over-expenditure of the AFE for this well of approximately $1,200,000. In addition, total depth of casing in this well was stuck and set approximately 810 feet short of the drilled TD. Because of this, reserves were irretrievably lost at this location. Ultra has estimated that the drilling cost for the #3-22D without the drilling and completion problems would have been approximately $560,000 more than a similar vertical well would have cost.

McMurry Oil Company's directional drilling at the Jensen #4 was successfully completed. However, this well also resulted in significantly more expense and drilling time as compared to a vertical wellbore. Additionally, the casing in this well soon parted, resulting in the irretrievable loss of economically recoverable reserves.

The direct incremental cost increase for directionally drilling these two wells is approximately $1,000,000. The actual costs will far exceed that if additional wells are drilled to recover bypassed gas reserves. In the alternative of not drilling additional wells for the bypassed reserves, waste will occur and maximum economic recovery of the resource will not have been achieved.

DISCUSSION:

The following discussion elaborates why multiple wells from a single pad are not technically or economically feasible.

1) Directional drilling of multiple wells from single pads or existing pads and centralizing production facilities will result in only minor reductions in surface disturbance at best. Pad drilling may actually result in an *increase* in surface disturbance, depending on topographic constraints, location of production facilities and pipeline corridors.

47

McMurry Oil Company's limited data with regard to reservoir heterogeneity, structural complexity caused by faulting, and depositional variability in the Pinedale Anticline Project Area contributes to the assumptions used in this discussion. Because the Pinedale Anticline Project Area is relatively unexplored, it is assumed for purposes of this discussion that the initial test in an area will be drilled from a pad large enough to accommodate only a single well. Until some level of reservoir knowledge is obtained in an area, each well would be completed for reservoir evaluation purposes before the next well is drilled. Based on McMurry Oil Company's experience in this area, and with very limited information regarding the nature of the reservoir or the ultimate recovery of gas from a well, it would not be prudent to drill a subsequent well until an initial well's productive capability has been adequately determined through completion testing of some extended duration. Rigs would have to be moved out and stacked or rigged up on another location while completion operations were conducted and then moved back in to drill the next well if the prior well results warranted it. Drilling contracts and construction expenses would be exorbitantly expensive if standby was paid for drilling rigs and crews while completion operations were conducted on the prior well and the location enlarged for a new well. Rig moving costs would also cease to be a cost saving if each well was completed before drilling the next, which is prudent under the current circumstances.

Multiple wells cannot be drilled from a pad of the same dimensions used to drill a single well. Using the assumptions provided by BLM in the "Comparison of Alternatives", an average of 7.1 acres of disturbance is required to construct a typical pad for drilling a single, vertical well. This number includes the well pad and road/pipeline disturbance. After the well is completed and tested, production equipment is installed on the cut portion of the pad. Subsequent to completing a well, fluids are typically allowed to evaporate or are removed from the reserve pit in the cut portion of the location, which is then backfilled. All but approximately 1.5 acres per well pad is typically reclaimed. This area is required for production equipment and for space to operate work over rigs. An additional 1.1 acres of long-term disturbance remains for the road to each well site. The total long-term disturbance associated with a single, vertical well pad is approximately 2.6 acres.

To drill multiple wells from an existing production location requires avoiding the existing wellhead, production equipment, backfilled (or open) reserve pit, and placing the rig a safe distance (approximately 100 feet) from a producing wellhead.

Depending on topographic and other physical constraints, every second well from a multi-well pad could re-use the reserve pit from the previous well. However, this would require either a larger capacity pit or the removal of pit fluids to be disposed off-site (resulting in additional costs) before drilling the second well. Utilizing a reserve pit (of the same size for one well and hauling off the fluids before drilling the second well) for two wells would potentially save slightly more than 1/2 acre in surface disturbance on the second location. In practice this means that little, if any of the 1.5 acres of long-term disturbance associated with a production location would overlap the pad needed to drill the next, directionally drilled well. Therefore, essentially *no* long-term surface disturbance would be avoided by this technique.

48

The directional well would now be located far enough from the first well that *a larger* production pad would be needed to permit maintenance vehicles to access the new wellhead, resulting in a potential increase in the long-term disturbance associated with each multiple well pad. If the production facilities were not co-located with the wells at this location, additional surface disturbance would be required elsewhere to construct a centralized production facility. In either case, enough long-term disturbance would need to remain at the location to rig up a work over rig on each well for future maintenance and well work without shutting in the other wells located on that pad.

Reductions in road disturbance will be minimal as well. Surface disturbance reduction is minimal even in a simplified, extreme case where the operators drill four wells from one central pad versus drilling four wells from four, equidistant pads in a 160-acre block. Drilling four wells from a single pad in this scenario would result in the elimination of road-related disturbance of less than one acre. In other words, for every 160-acre block drilled on 40-acre spacing patterns the increase in long-term disturbance is approximately 0.7 acres as compared to drilling the four wells from a single pad.

48

Individual pipelines would need to be constructed from each of the wells on a multi-well pad to a centralized production facility site. This could potentially decrease surface disturbance, depending on site-specific conditions. This decrease in surface disturbance would only be realized if all the lines were laid parallel to one another in a common corridor. This decrease would however, be offset by the surface disturbance associated with constructing a centralized production facility. However, essentially all of the pipeline ROW would be reclaimed, so no long-term surface disturbance reduction would be realized.

The above discussion assumes a very improbable scenario of one multiple well pad centrally located in each quarter section versus four equidistant single well pads centrally located in each quarter/quarter section. It is very unlikely that a multiple-well pad would always be located in the center of a 160-acre block. Much of the project area that BLM envisions requiring multiple well pads to mitigate drilling impacts coincides with rough topography associated with the Mesa and wetlands associated with the New Fork River. These features make it highly unlikely that a drilling pad large enough to accommodate four wells in an environmentally acceptable manner can always be located in the center of a 160-acre block. Additionally, the justification for this mitigation, for the most part, is to mitigate impacts to wildlife. It is highly improbable that each sage grouse lek, or crucial habitat would be situated such that well pads could be constructed in the manner described.

49

Because existing locations in the field were not planned in anticipation of drilling multiple wells, most are situated where it is nearly impossible to enlarge them in an environmentally acceptable manner. Impacts to steep slopes and sensitive soils, visual impacts, and the Lander Trail would be difficult, if not impossible, to avoid when enlarging existing pads or constructing new, multiple well pads to the required dimensions. Additionally, planning to drill multiple wells from one pad would certainly affect the choice of locations for that pad; potentially resulting in unnecessary surface disturbance should the effort result in a dry hole.

49

For these reasons, directional drilling would have little, if any, positive effect and could possibly have a detrimental effect on both the amount and long-term effects on surface disturbance associated with the drilling, completion, and production of wells in the Pinedale Anticline Project Area.

50

2) Directional wells require a longer period of time to drill than vertical wells, resulting in increased drilling-related impacts and delays in production/royalty payments.

It has been the operator's experience that these types of drilling activities take up to twice as long to drill as vertical tests. It follows that either the number of rigs being utilized in developing the field or the time required to develop the field must increase proportionate to the increased drilling time. Increases in either the number of rigs or drilling time translates into increased drilling-related impacts such as lights, noise and traffic. It therefore logically follows that requiring directional wells to be drilled will increase the drilling time and will result in increased drilling-related impacts to wildlife.

51

Pad drilling will result in delayed receipt of royalties by the mineral owners, primarily the federal government in the Pinedale Anticline Project Area and receipt of tax revenue by the State. These are exactly the types of impacts that should be mitigated against, not be mandated by a requirement for four well pads per 640 acres, resulting in directional drilling if well density will need to be greater to efficiently recover the resource. While pad drilling may appear to give short-term positive benefits, in the long term, pad drilling will actually result in impacts contrary to the public good.

52

3) If additional drilling pads are not permitted or "s"-shaped wellbores are not drilled, an unacceptable waste of hydrocarbons and loss of federal royalties will occur.

53

Natural gas reservoirs in the project area are lenticular and compartmentalized. Within the central portion of the Pinedale Anticline Project Area there are literally hundreds of lenticular sands present in the zones of interest, and thousands of reservoir compartments in an areal section. In order to maximize recovery of hydrocarbons from these reservoirs with the fewest possible wells (and drilling-related disturbances), it is vital that the entire saturated section is penetrated by a vertical, or near vertical wellbore. This method is the only way to achieve a geometric development pattern consistent with the highly lenticular nature of sand deposition and the near-vertical faulting that has further complicated an

already complex set of very low-permeability reservoirs. There are only two ways to access the reservoirs vertically, drill vertical wellbores, or drill "s"-shaped wellbores.

There are other types of directional wells that could be drilled in the project area, including "slant" wellbores or horizontal wellbores. Looking at a plan view, i.e. down from above, it would appear that three wellbores, vertical, slant and horizontal would effectively develop an identical area since all three begin at the same point and end at the same point. That is clearly not the case. A group of vertical wellbores with horizontal legs drilled parallel to the depositional bedding plane exemplifies the need for vertical wellbores. When looked at in the vertical section, only those sands penetrated by the horizontal portion of the wellbore would be produced. Any sands above or below the bounding shale breaks would be left totally undrained. Individual sands in this complex of lenticular sand reservoirs are known to have more lateral extent than vertical extent, i.e. will extend for hundreds of feet laterally versus tens of feet vertically. These reservoirs can be developed by far fewer vertical wells than horizontal wells.

The slant wellbore would penetrate nominally the same number of sands as the vertical wellbore. However, a large wedge-shaped area between the drill pad and an adjoining well pad is left undeveloped. This wedge-shaped area on a two-dimensional diagram is actually a very large conical area when looked at in three dimensions. That conical area would not be drained without the drilling of additional wells. These reservoirs can be developed by far fewer vertical wells than slant wells.

Stimulation of reservoirs through deviated wellbores is known to be less efficient than stimulations in vertical wellbores. This aspect of completing slant or horizontal wells would also result in a loss of recoverable hydrocarbons.

If these lenticular sands are not effectively drained because of the problems associated with directional drilling and lack of vertical penetration, or completion difficulties, then clearly an unacceptable waste of hydrocarbons and an associated loss of federal royalties will occur. The only other alternatives are to develop the field on a much denser well spacing, or drill "S"-shaped wellbores with intermediate casing, leading to unnecessary increases in risk, drilling and operating expenses, increased disturbance, and unacceptably high reclamation costs. 54

4) Directional drilling greatly increases the mechanical risks associated with drilling and completing natural gas wells. 55

As was discussed above, the entire hydrocarbon section needs to be penetrated as nearly vertical as possible in order to maximize efficiency in recovering hydrocarbons. For multiple reservoir wells, this requires an "S" shaped wellbore. This is a wellbore which starts out vertically, starts building angle once surface casing is set, builds angle until a pre-determined angle is reached, drills laterally at that angle for a pre-determined distance, drops angle until it is again essentially vertical and then penetrates the entire productive section near vertically.

Mechanical risks include an increase in the likelihood and severity of key seating problems while drilling. A key seat is a notch worn by the body of the drill pipe in a ledge of hard rock. This notch is worn in the rock by the rotation of the drill pipe where it is bent around the ledge by a curve in the wellbore. The notch is too narrow to allow the drill pipe joints or the drill collars to be pulled back up through it. The more weight that is hanging below the key seat, the worse the problem becomes. In an exploratory area such as the Pinedale Anticline, it is impossible to determine accurately where the top of the productive interval will be. This makes planning and engineering an s-shaped wellbore a guess at best. It is likely the initial kick-off point will be directly below the surface casing shoe in wells at Pinedale Anticline Project Area and the second curve back to vertical will occur at about 8200'. This results in more and more drill pipe (i.e. weight) hanging below the two curves as the well is drilled deeper. 56

The most significant mechanical problem associated with drilling "S" shaped wellbores is drag. Drag is the friction caused by the drill string lying against the side of the wellbore. In a perfectly vertical wellbore, there is essentially no drag. As the deviation of the wellbore increases, drag increases. As the number of curves and doglegs increase, so does drag. It is much easier to push something rigid around a bend than it is to pull it back out since the drag through each bend is greatly increased. Compound the situation of drag with two designed bends, fractured and steeply-dipping beds, high formation pressures, natural dog legs, and more drill string below the second curve than above the top curve and an unacceptable, extremely dangerous and high-risk drilling situation exists. The operators estimate that they would lose at least one of every four "S" shaped wellbores and would experience drilling problems in all the rest. This results in increased drilling-related impacts, unacceptably high drilling and completion costs, and ultimately unacceptable project economics. 57

The "S" type wellbore is probably the most complicated type of wellbore that can be drilled. It is significantly more complex and risky than the drilling of horizontal legs from a vertical wellbore.

There are also physical limitations that must be considered when drilling these types of "S" shaped wellbore. Effectively these limitations preclude the applicability of the subject 160-acre development directional drilling program from a single drilling pad for areas requiring 40-acre infill wells. 58

The first limitation is the distance from the surface-casing shoe to the top of the target interval where it is necessary to deviate the wellbore back to vertical. In directional drilling in competent beds the maximum recommended rate for

building angle is 5 degrees per 100 feet of hole drilled. A more conservative build rate of 2.5 to 3.5 degrees per 100 feet of hole is highly recommended for wells with more vertical section below than above the second curve. Rates of build more severe than these recommendations are problematic for key seating while drilling, logging, for running casing through, for running completion tools, for workovers and for operating any kind of artificial lift system for liquid production.

Due to the surface geology in the Pinedale Anticline Project Area, the operator's have been required to set approximately 1500 feet of surface casing. Therefore, the kick-off point or point of controlled angle build can be no shallower than 1500+ feet. The top of the productive, potentially over-pressured Ft. Union sands is found at a nominal depth of 8200 feet. This means that the wellbore must be deviated and returned to vertical within a 6700-foot section of dipping, highly fractured beds. At an angle build rate of 3 degrees per 100 feet of hole, it takes a vertical distance of 955 feet to reach 30 degrees from vertical. For the two legs of an "S" shaped wellbore, the vertical distance becomes 1910 feet. The lateral or horizontal offset generated in these two curves is 512 feet. Drilling the remaining 4290 feet of the hole at the 30-degree angle generates an additional 2145 feet of offset. The total offset possible is therefore 2657 feet for an "S" shaped wellbore which is designed to kick off below 1500 feet at a maximum build rate of 3 degrees per 100 feet of hole, achieve a maximum deviation of 30 degrees and be vertical at a depth of 8200 feet. In practice the offset is likely less than 2657 feet due to problems with starting and maintaining the build rate of 3 degrees per 100 feet of hole in these drilling conditions. To drill deviated wells with legal bottom hole locations, spaced on 40 acres, from one well pad located in the center of 160 acres requires a lateral offset of more than 933 feet. If the well pad is placed in the center of a 40-acre block and the first well drilled as a vertical test, then the subsequent three, directionally drilled wells would require horizontal displacements of 1320 feet to 1866 feet. These limitations do not seem to technically preclude 40-acre development from centralized well pads. However, in real-world situations, drilling these types of well bores has proven to be very technically challenging and expensive.

58

The second limitation for drilling long-reach directional wells is the amount of time an operator can safely drill deviated hole before setting intermediate casing. Experience on the Anticline and at Jonah Field has shown that operators may lose the wellbore if it is left "open" or uncased for too long a period of time.

59

The third limitation for drilling long-reach directional wells is casing wear. As is the case with key seating, the drill pipe also lays against the casing as the well is drilled. McMurry Oil Company used casing wear protectors when drilling the Jensen #4 which provides some measure of protection against casing wear. However, that well experienced a casing failure. It is not known how long an operator can drill directional hole on the Pinedale Anticline without compromising the integrity of surface casing. In addition, rental on the casing protectors adds to the cost of directionally drilling a well.

60

Ultra's experience with an "S" type wellbore at the #3-22D demonstrates that even a nominal horizontal displacement of 643 feet can result in extraordinary problems and costs unless a string of intermediate casing is set. Ultra was stuck for an extended period of time in that well, greatly increasing well costs and associated drilling-related impacts. In addition, Ultra was not able to obtain open-hole logs in their wellbore. The lack of open-hole logs has made it extremely difficult to evaluate the well for reserves and completion design and techniques. Finally, the casing depth was approximately 810' short of the drilled TD because of hole problems. This means a significant portion of reserves has been left behind. If these reserves are to ever be recovered, another multi-million dollar well will be required.

61

5) Directional wells cost significantly more that conventional wells to drill and complete, and may be marginally economic for an average well.

Using actual cost data from wells drilled in the Pinedale Anticline Project Area, it is estimated that s-shaped, directional wells cost an additional $500,000 to $600,000 to drill and complete versus vertical wells. This increase in costs is in part due to the increased duration of drilling activities and to the necessity of having to set an intermediate string of casing, a step not required in drilling vertical wells. Drilling and completion costs for directional wells versus straight holes are also higher due to the directional drilling equipment and personnel, larger surface casing, casing head, and bits, additional cementing for intermediate casing, an extra logging run prior to setting intermediate casing, costs for the different mud required for directional drilling, and other associated costs. These costs do not include any additional costs for the hole problems that have been experienced in virtually every deviated well drilled in the area to date.

62

Even with the information provided by the economic analysis, (Appendix B, PADEIS) to consider directional drilling a reasonable alternative one must be able to predict the production rate from a proposed well with a high level of confidence in order to determine whether or not it will be economic to drill. Predicted production rates have rarely, if ever, matched actual production rates in the Pinedale Anticline Project Area. This high level of uncertainty makes it virtually impossible to predict the economic viability of a directional well prior to drilling and completion.

CENTRALIZED PRODUCTION FACILITIES DISCUSSION:

Central production facilities are not technically feasible as they were analyzed in the PADEIS. The mixture of water vapor and hydrocarbon gases freezes at temperatures significantly above ambient ground temperatures. This requires dehydration of the gas at the well. The goal of centralizing production facilities, as I understand it, is to reduce the amount of traffic to each well site. Since it will be

necessary, at a minimum to have dehydration equipment at the well site, regular visits to individual well sites will still be required.

Centralized production facilities may be in violation of BLM regulations to ensure the proper handling, measurement, disposition, and site security of leasehold production. Hydrate formation is a type of freezing unique to gas wells. Different ownership of the hydrocarbons legally requires the production to remain segregated until it can be measured. Wet gas cannot be accurately measured so it is difficult if not impossible to effectively meter production at the well without liquid separation equipment. 63

The PAEIS describes the analyzed disturbance associated with centralized facilities as approximately 5 acres. MOC recommends that this be revised to approximately 10 acres for safety reasons. WYOGCC regulations state that fired equipment must be at least 100 from the wellhead. In addition, other equipment (non-fired) must be properly spaced for safety reasons. If a centralized battery is assumed to be co-located with a producing well, this regulation limits how the facility can be sited. MOC estimates that the 10-acre disturbance is a minimum. 64

On page 2-48 of the PADEIS it is stated that the elimination of production facilities at well pads would result in a reduction in the need for daily equipment inspections at well pads, thereby minimizing the need to keep roads open to well pads year long. This assertion is based on an assumption that a well will be completed in a relatively short timeframe. Experience on the anticline would dictate that this is not true. An operator might not be able to complete a well in the timeframe allowed by seasonal restrictions, necessitating keeping the road open for longer than the EIS contemplates. 65

The BLM ignores the fact that pipelines from wellheads to centralized production facilities will have to be high pressure rated at 8,000 lb/psi. This will result in a significant expense to operators not analyzed in the PADEIS. Emergency shut down systems would have to be installed to protect the environment at "unmanned" facilities. These would require maintenance, increasing visits to well sites beyond that mentioned in the DEIS. As pressure in wells declines, a pigging system will have to be installed to keep lines free of liquids. This will result in additional expense to operators and much more frequent visits to a well site in the later years of its' productive life. Further, operators may at some time find it necessary to install artificial means of production enhancement. These will also require maintenance visits not accounted for in the PADEIS analysis. 66

Even if this alternative did eliminate the need for hauling of condensate and water from individual well pads, which MOC does not agree with, roads or some form of access must be kept open to wells for general maintenance or emergency visits. Otherwise, this must be accomplished via snowmobile or some other form of snow vehicle. This raises a safety issue with regard to having people out in these types of winter weather conditions with no expeditious 67

method to access them in an emergency. Additionally, the resident and migratory deer that utilize the Mesa as winter habitat will undoubtedly find these cleared roads to be better access routes than trudging through deep snow. If planned and managed properly, plowed roads can be a resource to wildlife, rather than a detriment. 67

BLM contends that with centralized facilities, well pads would be less visible. MOC believes that, while concentrated in one location, centralized facilities will present a much larger visual impact than individual tank batteries. Centralized production facilities will have approximately 10,000 barrels of condensate storage capacity and 8,000 barrels of water storage capacity. If BLM persists in requiring low-profile tanks, approximately sixty (60) tanks will be required to reach these levels of storage capacity. Clearly this number of tanks will not fit on a 5-acre site. If BLM believes that facilities of this size can be "hidden" from view, and still allow for the necessary siting requirements, MOC submits it is mistaken. 68

CONCLUSIONS:

Based on the above discussion, a requirement for consolidated drilling pads and production facilities in the Pinedale Anticline Project Area is neither technically nor economically feasible nor does it mitigate the impacts drilling might have:

1) Directional drilling of multiple wells from single pads or existing pads and centralizing production facilities will result in only minor reductions in surface disturbance at best, and may result in an *increase* in surface disturbance, depending on topographic, wildlife, and other surface constraints, location of production facilities and pipeline corridors. 47

2) Directional wells require a longer period of time to drill than vertical wells, resulting in increased drilling-related impacts. 51

3) If additional drilling pads are not permitted an unacceptable waste of hydrocarbons and loss of federal royalties will occur. 52

4) Directional drilling greatly increases the mechanical risks associated with drilling and completing these wells and increases the cumulative impact of the drilling and completion operations. 55

5) Directional wells cost significantly more than conventional wells cost to drill and complete. This will result in marginal areas not being developed, leading to a further waste of the resource at the Pinedale Anticline Project Area. 62

6) Centralized production facilities, at best, result in only minor reductions in surface disturbance. 64

7) Centralized production facilities cannot realistically achieve the stated goal of reducing human presence in the project area. 66

8) Centralized production facilities will not necessarily reduce visual impacts. 68

RECOMMENDATION: BLM should only consider directional drilling and centralized production facilities on a case-by-case basis, as it does currently. The case-by-case decision should be based only on existing lease stipulations and standard stipulations, and operator involvement. BLM has not shown these alternatives to be technically or economically feasible or effective in mitigating impacts from oil and gas development, therefore they should not be applied. 69

Resource Protection Alternatives: Rig Limitations

Selection of this alternative would be completely arbitrary, capricious, and impossible to manage. McMurry Oil Company (MOC) believes BLM must reject phased development as an alternative because:

- Phased development does not pass the tests of technical and economic feasibility and/or reasonableness as required by NEPA.
- Phased development will result in the violation of lease rights.
- Phased development ignores the BLM mandate for maximizing recovery of mineral resources.
- Phased development will result in drainage and waste of precious natural resources.
- Phased development will result in violations of correlative rights of all mineral owners and lessees.
- Phased development does not reduce cumulative impacts; it merely distributes the same level of impacts over a longer timeframe.
- Phased development is inappropriate for oil and gas resource extraction activities.

BLM has included a rig limitation as part of all of the alternatives analyzed in the Pinedale Anticline EIS (PAEIS). McMurry Oil Company (MOC) believes BLM was correct in considering phased development as a component of the Resource Protection Alternatives (RPA). BLM appropriately included an analysis of some of the impacts of such a restriction in the document. However, MOC does not believe that the analysis of the impacts of enacting such restrictions is aptly or thoroughly covered in the document. MOC also submits that analyzing the impacts associated with limiting the manner and pace of development through an eight-rig limitation in the Standard Stipulations Alternative was inappropriate. It is not a standard stipulation. 70

Technical and Economic Feasibility and Reasonableness:

MOC agrees that BLM does have the authority to regulate the manner and pace of development and is correct in analyzing this alternative in the PAEIS. In fact, as stated at 40 CFR §1502.14 the alternatives and the proposed action are the "...heart of the environmental impact statement." NEPA requires that the agency study all reasonable alternatives. Under 42 U.S.C. §4332(2)(e), an agency must "study, develop, and describe *appropriate* alternatives to recommended courses of action in any proposal which involves unresolved conflicts concerning alternative uses of available resources." (Emphasis added). McMurry Oil Company believes that the BLM's authority to regulate the manner and pace of development is limited to what is reasonable, as is required by NEPA. The CEQ regulations specifically state at 40 CFR §1500.2(e) that BLM should, to the fullest extent possible, "Use the NEPA process to identify and assess the *reasonable* alternatives to proposed actions that will avoid or minimize adverse environmental effects of these actions upon the quality of the human environment." (Emphasis added). 40 CFR §1502.14(a) states that the agency shall "rigorously explore and objectively evaluate all *reasonable* alternatives..." (Emphasis added). Clearly, BLM must submit this mitigation to a test of reasonableness. Thus far, BLM has not.

The CEQ regulations and case law have also clearly established that BLM only need study "reasonable" alternatives, that are technically and economically reasonable and feasible (40 CFR §1502.14(a); Coalition for Canyon Preservation v. Bowers, 632 F.2d 774, 783 (9th Cir. 1980). The test of reasonableness is discussed in CEQ's Forty Most Asked Questions Concerning CEQ's National Environmental Policy Act Regulations printed in FR Vol. 46, No. 55, 18026-18038, 3/23/81. The answer to question 2a of the "Forty Questions" states, "Reasonable alternatives include those that are *practical or feasible from the technical and economic standpoint and using common sense*, rather than simply desirable..." Clearly, NEPA also requires that an alternative be technically or economically feasible and reasonable before it must be analyzed.

RECOMMENDATION: It is incumbent upon BLM to include a determination of the technical and economic practicality and feasibility of the rig limitation in the PAFEIS in the determination of the overall reasonableness of the alternative. It is irrefutable that the proponents of the action have the best data to assist the BLM in determining the technical and economic feasibility of alternatives. However the BLM has ignored the operator's comments regarding the feasibility of the RPA, including specific comments with regard to the appropriateness of a rig limitation (Appendix C DEIS). It is imperative that BLM consider these and past comments and respond appropriately to them in the PAFEIS. 71

Lessor's and Lessee's Rights:

MOC strongly believes that the imposition of restrictions on the pace of development must be balanced with effective recovery of the resource. Imposition of staggered development will result in an inefficient recovery and attendant waste of the natural gas resources. This would be in direct conflict with the BLM's mandate to maximize recovery of natural resources. None of the standard language or stipulations of the leases held by MOC in the project area would have led a lessee to conclude that BLM could restrict the number of rigs working in 300 square miles, and effectively block development activity for some unspecified period of time. If an arbitrary limitation imposed by BLM, such as restricting rig counts, violates the lease agreement between the BLM and the company, unreasonably interferes with the lease rights of a lessee, allows drainage or waste of federal minerals, or forces an operator into a situation where their correlative rights are violated, appropriate legal action would likely be pursued by BLM, other mineral owners such as the State of Wyoming, or an operator. BLM must assure that the decision it makes with regard to restricting the manner and pace of development is consistent with both the lessor's and the lessee's rights.

72

73

The BLM's right to control the rate of development is clearly specified in the language of U.S. GPO: 1992-774-017/87034, the standard lease form upon which many of MOC's leases were offered and accepted within the PAEIS project area. On this form, under "Lease Terms Section 4 Diligence, rate of development, unitization, and drainage", it is stated, "Lessor reserves the right to specify rates of development and production in the public interest..." The language under Section 6, "Conduct of Operations" states that, "Lessee shall conduct operations in a manner that minimizes adverse impacts to the land, air, and water; to cultural, biological, visual, and other resources, and to other land uses or users. *To the extent consistent with lease rights granted*, such measures may include, but are not limited to, modification to siting design or design of facilities, timing of operations, and specification of interim and final reclamation measures. Lessor reserves the right to continue existing uses and to authorize future uses upon or in the leased lands, including the approval of easements or rights-of-way. *Such uses shall be conditioned so as to prevent unnecessary or unreasonable interference with rights of lessee.*" (Emphasis added) Clearly BLM has a legal obligation to protect the environment, the public interest as well as the lease rights irrevocably granted to the lessee.

The Lessee's rights are also discussed on this same standard lease form under "Lease Terms, Section 4, Diligence, rate of development, unitization, and drainage". Here it is stated, "Lessee shall exercise reasonable diligence in developing and producing, and *shall prevent unnecessary drainage to, loss of, or *waste of leased resources.*" Section 4 continues, "*Lessee shall drill and produce wells necessary to protect leased lands from drainage* or pay compensatory royalty from drainage in amount determined by lessor." (Emphasis added)

The drilling moratorium imposed by BLM on May 7th is a corollary scenario where drilling was restricted and correlative rights quickly became an issue. If BLM determines that a rig restriction creates a situation whereby federal minerals are being drained by a State, fee, or Federal lease with a lower royalty rate, BLM would unhesitatingly demand that a protective well be drilled and compensatory royalty be paid. In fact, when it was determined that Federal minerals may be in danger of drainage from offsetting wells on private lands, BLM *has* demanded wells be drilled in excess of the limits set by the drilling moratorium enacted by the May 7th decision. However, even when the correlative rights of the Lessee have been shown to be at risk, BLM has coincidentally shown strong reluctance in granting exceptions, and in more than one case denied exceptions to allow protective wells to be drilled. BLM's inequitable consideration of these issues in the past raises grave concerns from the operators of the leases in the Pinedale Anticline Project area. The situation absolutely requires that BLM analyze and divulge in the PAEIS the impacts to correlative rights of Lessee's should a rig limitation be enacted.

Management of a Rig Restriction and Existing Stipulations:

BLM has not included a discussion in the PAEIS as to how it would apportion the rigs between the eight operators, or the impacts of the integration of a rig restriction with existing stipulations. In the analysis in the PAEIS, BLM has attempted to consider the reduction of impacts to existing resources from a rig restriction, but has ignored the other consequences of enacting a rig restriction in the project area.

BLM must answer the questions of which operator will receive approved APDs and on what basis those decisions will be made. BLM ignores the interrelationship of restricting rigs and the existing seasonal restrictions. If an operator requests approval to drill in an area that has existing seasonal restrictions and is delayed by this mitigation until the seasonal restrictions are in force, drilling of a well could be delayed by more than a year.

74

BLM has failed to consider what would happen if an operator applied for permission to drill when a project was economic, but was delayed by BLM regulating the pace of development until such time that the project became marginally economic or uneconomic. BLM must analyze and divulge the economic impact to operators imposed by regulating the pace of development. This analysis must also divulge the waste of the public resources should projects become uneconomic due to delay, and the resulting socioeconomic impacts.

BLM fails to discuss its plan for the inevitable issue of expiring leases. Even if BLM assumes that it will grant extensions, this does not address the issue of

correlative rights. Based on the results of current drilling in the project area, unitization of non-unitized lands will be problematic.

BLM ignores the difficulty and legal ramifications of managing this mitigation in concert with only allowing four or less well pads per square mile. In the PAEIS analysis BLM must acknowledge that restricting surface disturbances to an average density of less than four per square mile AND imposing a rig restriction will result in a clear violation of the lessee's rights. 74

Cumulative Impacts:

BLM fails to adequately demonstrate that controlling the pace of development in the project area would reduce cumulative impacts. BLM states that reduced levels of human presence and reclamation of disturbed areas before additional disturbance occurs will likely decrease impacts. But BLM fails to consider that without a change of the development scenarios the same number of wells will eventually be drilled. Restricting drilling doesn't eliminate impacts; it only prolongs the timeframe within which they occur. BLM does not conduct adequate analysis to determine the benefits, if any, of prolonged drilling timeframes.

Interestingly, the citations by BLM to support its authority to control the manner and pace of development contain other germane points. For instance, the Wyoming Outdoor Council appeal of the BTA project (147 IBLA 105 (1998)) referenced by BLM, also stated that it was not demonstrated that "the alternative of staggered development would have a lesser impact than that considered by BLM." This same statement is applicable in this case. 75

BLM fails to acknowledge that by delaying production, installation of compression and pipelines will be piecemeal, necessitating repeated construction to add new compression and/or increasing pipeline capacity. If the rig restriction was not enacted, operators could presumably develop productive areas more quickly. With an understanding of productive capabilities of an area and some understanding of the timeframe that production could be established, compression and pipeline needs can be addressed efficiently. Without this understanding, compression and pipelines will need to be continually added as the slowed pace of development brings on new gas.

BLM assumes that reclamation will return habitat function in some unspecified timeframe that will reduce habitat impacts. BLM has not conclusively demonstrated that the impacts from human disturbance need to be mitigated (see Wildlife Habitat Model comments, this document). With regard to limiting surface disturbance, to restore habitat function with regard to sage grouse (re-establishment of sage brush) and mule deer (re-establishment of browse, such as forbs and brush) may take decades. A rig limitation will not allow this habitat to become fully functional prior to additional disturbances occurring. 76 77

RECOMMENDATON: BLM should acknowledge that imposing a rig limitation in the northern half of the project area does not significantly reduce cumulative impacts. BLM should conduct analysis that clearly compares the alternatives and calculate the cost benefit of a rig restriction. BLM must include an impact analysis for the socioeconomic affects of a rig limitation. The PAEIS clearly acknowledges the importance of oil and gas revenue to Sublette County, yet BLM ignores the impacts of delaying production to local and county government revenues. 78

Analysis Miscalculations:

It is completely inconsistent to indicate that the BLM would limit the number of active rigs and concurrently state that from 15 to 70 wells could be drilled per year. Unless BLM has factored in a large number of rigs working on non-federal lands on a year-round basis, drilling and completing 70 wells a year is impossible. If this is the case, BLM has made an erroneous and unsubstantiated assumption that vast reserves of oil and gas will be discovered on non-federal lands leading to heavy development activity in those areas.

Using the stated average drilling time of 35 days from the EIS, each rig could only drill 10.43 wells per year, if they were allowed to drill year-round. Limiting the number of rigs to 8 allows 83.43 wells to be drilled per year. Five rigs could conceivably drill 52.14 wells per year. These estimates are only for wells drilled vertically. Deviated wells have proven to take considerably longer to drill in the project area. In some cases, it has required almost 90 days to drill a directional well. These numbers also do not include the time required for rigging down, transportation, rigging up, location construction, the potential fro drilling problems, or rig maintenance or repairs. If BLM were to consider these time requirements as well as seasonal restrictions, location construction delays, and the APD approval process, it would be impossible to approach the well counts in the timeframes analyzed in this document. This is a severe flaw that must be addressed. 79

Conclusion:

Ironically, BLM has included language in the document that reaches precisely the same conclusions that MOC has reached. On page 2-2 of the draft PAEIS, BLM states that, "However, BLM does have authority to regulate the manner and pace of development of a lease so long as there is no "taking" of the rights granted in the lease. In regulating the development of these leases, BLM is directed to allow no undue or unnecessary impacts to the resources that occur on the leased lands. As such, BLM strives to maintain a balance between the rights granted to the operators and an adequate level of environmental protection. To not identify and implement mitigation opportunities that eliminate undue or unnecessary impacts would conflict with BLM's regulations. Conversely, to develop protective measures that are so stringent that they effectively preclude development of the

leases would contradict the terms of the lease." However, BLM has failed to fully analyze the impacts associated with the implementation of a rig restriction in the draft PAEIS. BLM avoids answering the question of whether "takings" would occur if this restriction were implemented. BLM ignores the question of whether or not this alternative "eliminates" or even effectively reduces impacts in a cumulative sense.

80

Experience in Jonah Field indicates that it is unlikely for any cause for concern to exist regarding levels of rig activity. To the best of our knowledge, there have not been more than 6 rigs working in the field at any one time. Currently there are only three. There is no indication in the document why BLM felt that this was a reasonable restriction to place on the pace of development. Does BLM believe that if more than 8 rigs were operating within the nearly 300 square mile project area, which constitutes an average density of 1 rig per 33 square miles, it would constitute a significant impact? McMurry Oil Company finds that difficult to understand and therefore questions the basis for proposing this restriction.

81

RECOMMENDATION: MOC recommends that BLM should not, under any circumstances, select this mitigation "opportunity" in the ROD.

Air Quality Analysis:

82

Review of Air Science HAP Analysis

MOC has participated in a review of the air toxics portion of the Anticline EIS. Based on this review, a number of issues in this analysis have been identified which will significantly overstate actual impacts. Comments addressing issues regarding emission calculations, modeling approach and exposure assumptions are detailed below.

Emission Calculations
Air Sciences used the VOC and HAP calculations from the Jonah II analysis as a basis for the modeling. The modeling is based on a benzene emission rate of 0.33 tons per year for the dehydration unit and 0.0003 tons per year for flashing losses. The flashing losses are based on a VOC emission rate of 9.3 tons per year. In the analysis it was assumed that these wells would have no controls. It appears that these emission estimates may underestimate uncontrolled emissions at Jonah II and that, in reality, controls would be required as part of EPA MACT and WDEQ BACT which would reduce actual emissions below these analyzed levels. The document and analysis should address the permit requirements of BACT for flashing losses as well as the requirements of MACT. Application of these controls under existing regulations would mitigate benzene impacts below what is stated in this analysis.

Modeling
There are number of modeling issues in this analysis. The discussion of the modeling in the technical support document is unclear with respect to modeling averaging time. It is assumed that the reported concentrations represent an annual average. It is suggested that whenever concentrations are reported that the corresponding averaging time be stated.

Another issue relates to the treatment of calm wind speeds in the modeling. Classical EPA guidance states that calm wind speeds should not be used in modeling. Typically a calm wind speed is defined as a wind speed of less than or equal to 1 meter per second and the resulting concentration is not included in any average concentrations. The HAP analysis reset wind speeds in the range on 0.5 to 1 meters per second to 1 meter per second and these were modeled as valid data, as opposed to treating these values as calms. This resulted in biasing the meteorological data to include more hours of low wind speeds when predicted impacts are greatest.

An additional issue with the modeling is that a very simplistic source description was used. Several simplifying assumptions were made which may have a profound affect on estimated concentrations. The first problem is that the modeling neglected to include aerodynamic downwash for the dehydration units and the separator. For sources with little momentum or buoyancy plume rise, downwash is an important aspect of plume dispersion. For these types of sources downwash will provide initial dilution of the plume and will result in lowering estimated ground level concentrations. This additional dilution is a result of turbulence generated from the process units as well as other nearby obstructions.

In an EIS one is dealing with idealized sites for which no detailed site plans are available. Thus, performing a site-specific downwash analysis becomes difficult. It is believed to be possible to develop a generalized site plan that can incorporate typical structure dimensions so that downwash can be included in the analysis. With respect to identifying structures to be included into the modeling, it is important to include the storage tanks (condensate and produced water tanks). These are very significant structures and are generally located within the area of influence of the emission points.

The modeling co-located all emission points (all emission sources were modeled at a single point). In modeling impacts close to the source, it is important to provide as much information as possible regarding source locations and physical characteristics of the emission unit. The distance between the separator and the dehydration unit can be very important in accurately estimating impacts. Again, generalized or typical relative source locations could be developed and used in describing emission sources and this would improve the accuracy of the modeling.

Another issue with the source description is that the typical release height of the dehydration unit and the separator are very different and this difference needs to be accounted for in the modeling. Emissions from the dehydration vent are released at an elevation of about 4.5 meters (used in the modeling). However, the separator emissions are typically released from the top of the storage tank at an elevation of about 10 meters or greater.

In summary, modeling of benzene impacts is biased towards overstating actual concentrations.

Concentration Effects
The resulting predicted concentrations were compared against an incremental benzene cancer risk of 1 in a million. This conversion was done using an EPA unit risk factor for benzene. A number of assumptions regarding exposure were made in performing these calculations. Different assumptions were made for the Maximum Exposure Scenario and the Most Likely Exposure Scenario. Under the Maximum Exposure Scenario it was assumed that a person would be exposed continuously at the modeled levels for a period of 30-years. Given the likely production life of such wells (9 to 15-years), as well as a decline in production and corresponding emissions, this case overstates the likely risk by approximately three (for a 9-year life) or two (for a 15-year life). For the Most Likely Exposure Scenario a 9-year well life was assumed and exposure durations were calculated. While these are appropriate, they need to be justified in the document.

It is recommended that the model concentrations be converted into risk estimates and plotted. Presenting the analysis results in this manner will better inform the reader of the perceived incremental risks.

Conclusions
It is believed that the hazards or risks associated with development are significantly overstated and portray results that are misleading. Conservatism has been added by: 1) ignoring the current regulatory mandated controls (MACT and BACT); 2) using a conservative modeling approach (meteorological data and source description) and 3) conversion of benzene impacts into an incremental risk.

General Visibility Comments

Review of the visibility modeling analysis reveals several important attributes. The first is that the proposed action, regardless of the development and emission scenario, by itself does not exceed the Forest Service Level of Concern (LOC) of 0.5 dv. The second is that when cumulative impacts are considered, the predicted combined impact is less than 1 dv (0.9 dv) for the maximum impact scenario. There are only nine separate or unique days when predicted impacts are above the 0.5 dv LOC. These conclusions suggest that there is not a significant visibility impact from any of the alternatives (levels of emission control or compression location) considered and as such, visibility and other potential air quality effects should not be considered pivotal in formulating the Record of Decision (ROD). It is also important to note that this modeling analysis is conservative and is likely to overstate actual impacts and this reinforces the conservative nature of this analysis. It is recommended that the document be modified to place the conservative nature of the analysis in proper perspective.

Post 95 Emission Inventory
While the modeling attempted to avoid double counting impacts from sources in the modeling and the background by limiting the background data to 1995 and corresponding emissions, this has still resulted in an inflated post95 emission inventory. This has resulted in overstated actual impacts.

Analysis of IMPROVE particulate reconstructed visibility data in the Bridger Class I area indicates that there is no significant trend in background values. This becomes even more apparent if the uncertainty of the measurements is included in any sort of trend analysis (6 percent precision and approximately 20 percent accuracy). The data indicate that in 1995 the 90th percentile was about 210 kilometers, in 1996 it was about 260 kilometers and in 1997 it was about 200 kilometers.

In an analysis done for the Wamsutter II Continental Divide EIS it was concluded that the magnitude of the emissions in the permitted but not constructed inventory between 1994 and 1997 was 3,252 tons per year or 75%. Since the Wamsutter II Continental Divide analysis was the starting point of this analysis, these data are very germane. Thus if this analysis had used the most recent monitoring data and adjusted the inventory to reflect this change in the baseline date, there would have been a very significant reduction in emissions included in the modeling for this source group. There is no way to quantify this effect of this change, but since impacts from this source category are responsible for the largest portion of the projected impacts, such a change would have reduced impacts considerably. Thus, it can be concluded from an emissions and visibility perspective, that projected impacts are extremely conservative.

Project Emissions
It is important to place the emissions from compressor engines in perspective. The modeling for compressor engines was based on potential emissions that represent the upper limit of allowable emissions. In reality, emissions from such sources would be lower than what was assumed in the modeling. Because of the assumed magnitude of these emissions, these sources would become a major source with respect to Title V. As such they would be required by WDEQ to demonstrate compliance through periodic monitoring (flue gas testing). Experience has shown that when engines are tested to demonstrate compliance within this manner that actual emissions are substantially lower (typically about

50 percent) than permitted levels JGGC has actual flue gas testing data available on all of it's compressor engines in the Jonah project area. Should BLM choose to incorporate these actual emission rates into the analysis, the data will be made available. As a result of such monitoring, the emissions used in this analysis are overstated and the results are conservative.

Presence of Weather Events

The Technical Support Document presents an analysis regarding the occurrence of weather events associated with the nine days when impacts were above 0.5 dv. We believe that this analysis should be expanded to examine the Pinedale transmissometer data to the fullest extent possible. Table 1 presents a summary of the transmissometer data from Pinedale for these critical days. Also included in this table are the average daily transmissometer data when it was available.

Table 1. **Summary of Weather Events for Critical Days and Associated Background Conditions**

Date	Hours Missing Due to Weather	Other Hours Missing	Extension (1/Mm)	Visual Range (Km)	Difference in Background (%)	Transmissometer Conclusion	Environ Conclusion	Maximum Predicted Impact (Dv)
2-Mar	17	0	53.857	73	-66	Weather Related	Weather Related	0.85 (a)
3-Mar	20	0	N/A	N/A		Weather Related	Weather Related	0.91 (a)
14-Mar	3	0	20.235	193	-9	Maybe	No	0.51 (b)
17-Mar	0	24	Missing	Missing		N/A	No	0.51
18-Mar	0	24	Missing	Missing		N/A	Maybe Weather Related	0.59 (b)
26-Mar	0	24	Missing	Missing		N/A	N/A	0.61 (a)
1-Apr	0	0	26.583	147	-31	Valid	No	0.91
17-Apr	6	0	22.267	176	-17	Maybe	Yes	0.52 (b)
20-Apr	6	0	26.933	145	-32	Maybe	Maybe	0.52 (b)
Modeled Background (Spring)			18.376	213				

Note: a negative value indicates overstatement of actual background conditions

a) Prediction that should be deleted from further consideration

b) Prediction that could be biased by weather

Based on this review as well as the information provided in the Technical Support Document, it is apparent that weather events occurred on March 2 (0.85 dv), March 3 (0.91 dv), March 20 (0.61 dv) and April 17 (0.52 dv) and these days should be excluded from any further analysis. In addition, on March 14 (0.51 dv), March 18 (0.59 dv) and April 20 (0.52 dv) there was a distinct possibility that weather events would have invalidated the visibility calculations as being not representative. For these days it is recommended that hourly concentrations be examined and those hours where weather events occurred should be excluded from the data record. With the exclusion of weather events this leaves only two days, March 17 (0.51 dv) and April 1 (0.91 dv) that have predictions above 0.5 dv.

In addition, there is further conservatism in these estimates because of the assumption of constant background conditions. Table 1 also presents the measured background from the Pinedale transmissometer. This information is presented as a percentage difference from the modeled background level. These data indicate that on April 1 (0.91 dv) the background visual range was overstated by 31 percent (147 kilometers versus 213 kilometers). Using the day specific background data would have reduced this estimate.

As indicated by these results, the projected impacts have additional conservatism incorporated into the calculations.

Method 4 Results
Another way to look at the conservatism in the visibility calculations is to compare the results presented in the Technical Support Document (Method 2) to Method 4 calculations. These calculations were preformed by Environ under contract to Amoco Production Company and McMurry Oil Company and are attached for reference.

Method 4 provides a more realistic refined analysis compared to Method 2. It is important to note that Method 4 methodology is consistent with EPA Modeling Guidelines regarding the use of background concentrations in a refined air quality impact analysis. In such an analysis, background conditions are analyzed as a function of the meteorological conditions. There are several other attributes that lend credibility to this calculation procedure. First, because background measurements are made continuously (hourly) a large database is available. Thus for a single year it is possible to record all the variation in background visual range. Secondly, this measurement technique provides a path-integrated measurement (over 1-2 kilometers) and is a direct measure of the visual range. This is opposed to the use of the IMPROVE particulate matter (PM) concentration measurements which represent a single point in space and from these data a reconstructed visual range is calculated. Thirdly, the changes in visual range that were calculated in the Method 4 analysis utilize the entire background frequency distribution. Thus, the impact of development was quantified for the cleanest day as well as all other days. Again, this provides additional realism in the analysis.

It is also important to contrast the Method 4 methodology with the screening calculations (Method 2) that were performed by BLM and presented in the DEIS. In the Method 2 calculation procedure it was assumed that background visual range conditions remained constant at the 90th percentile level for all days of a particular season. In this context it was assumed that the clean days would occur on every day of the year. The model-predicted changes in visibility were then referenced to these clean conditions. These screening calculations present an idealized representation of the calculated change in visual range and these calculations have no physical reality.

Comparison of Method 2 results to Method 4 for the proposed action show a reduction in projected impacts from 0.46 to 0.34 dv for the 1.5 g/hp-hr emissions scenario. This is a 35 percent reduction in predicted impacts. For cumulative impacts, the maximum predicted change using Method 2 was 0.91 dv. When Method 4 was used the maximum predicted change was 0.61 dv. This represents a 49 percent reduction in predicted impacts.

As demonstrated by this comparison, the use of a constant background level adds yet another level of conservatism to the analysis.

FLAG Methodology
The recent FLAG Phase I draft report, of which Forest Service is a member, states that the LOC for a single source is 0.5 dv and for a cumulative analysis the LOC is 1.0 dv. Based on these criteria the results of this analysis are within acceptable limits.

Visibility Conclusions
As shown by the rational developed in proceeding subsections, it has been demonstrated that the projected impacts for this proposed action both when considered by itself and when included in a cumulative analysis are conservative and have compounding levels of conservatism. Even with this conservatism, impacts are within acceptable limits. In addition, this conclusion can be reached without considering the emission reduction that was negotiated with industry and the Naughton Power Plant.

Specific Technical Comments

Levels of Emission Control
Several regulatory changes have taken place since the PADEIS was developed and these changes should be discussed in the document. Because of these new regulations, it is quite possible that VOC emissions will be reduced over what is presented in the EIS.

The first regulation that should be discussed is the WDEQ presumptive BACT regulation that requires controls to be installed on wells to reduce flashing losses. The second regulation is the EPA E&P MACT rule. This regulation will require controls on facilities to reduce HAP emissions and secondary VOC emissions.

Near Field NOx Modeling
The technical support document should discuss assumptions for simulating the conversion from NO into NO2 for the near field modeling.

RECOMMENDATION: BLM should divulge the built-in conservatism contained in the air quality modeling for both near-field and far-field impacts. BLM should also acknowledge that at least two valid methodologies for calculating visibility impacts exist and divulge the results of both to the public. BLM must consider the concept of full disclosure when it makes decisions to artificially exclude valid information in the PADEIS.

Cultural Resources

The BLM has failed to show how the suggested mitigation for cultural resources, in particular with respect to the Lander Trail, will solve the concerns identified in the document. It is apparent that many of the concerns are not based in fact or data, but instead seem to be unsubstantiated opinions.

BLM states on page 4-65 that it does not accept the National Park Service determination that the PAPA portion of the trail is not a "high-potential segment". The underlying premise not stated here is that BLM will ignore or overrule the National Park Service, who was charged with determining which segments of the Trial warrant the greatest level of protection through a public and peer-reviewed process. 83

BLM states in Section IV of the draft Programmatic Agreement that: "The Bureau will take the lead in encouraging the State of Wyoming to manage cultural resources on its land in a fashion compatible with those employed on Federal lands." The unstated opinion being that BLM knows better than the State of Wyoming how to mange resources on State-owned lands. This statement is in direct contradiction to the earlier letter from the State of Wyoming that discusses how it will manage surface resources with respect to oil and gas development on State-owned lands. It is disingenuous for BLM to declare the State's policies incorrect, especially in light of the State's role in this process as a cooperating agency. 84

The entire discussion regarding mitigation proposed for this segment of the Lander Trail and listing other mitigation opportunities presupposes that current lease stipulations and RMP-mandated mitigation is somehow not sufficient to preserve the Trail "experience". Once again, BLM's unstated opinion that led to this conclusion is that the RMP EIS/ROD mitigation requirements are somehow not adequate, notwithstanding the fact that they were developed through a public process conducted in accordance with NEPA regulations, and in conformance with all other mitigation across Federal lands. Analysis is not presented that corroborates these opinions. 85

RECOMMENDATION: BLM must reconsider all of these types of statements in the document. They exhibit an unusual bias and are unsubstantiated by data or analysis.

MOC hereby incorporates by reference the comments submitted by Ultra, Yates, Western, BP Amoco, Questar E& P, Anschutz, Alpine Resources, and HS Resources, as well as any other minerals extraction and related industry, industry group, or industry representative or consultant on the captioned action. MOC also adopts and incorporates by reference our own comments on the preliminary draft EIS Chapters 1 & 2, as well as the comments submitted by Ultra, Yates, BP Amoco, Questar E& P, Anschutz, Alpine Resources, and HS Resources, and any other minerals extraction related industry, industry group, or industry representative. MOC's comments on PAPDEIS Chapters 1 & 2 are attached for you reference.

MOC appreciates your consideration of these comments. Please feel free to contact me at 307-473-2033 if you have any questions.

Sincerely,

Robin M. Smith

Robin M. Smith
Manager of Environmental and Regulatory Affairs

Attachments:

Attachment 1: Jonah Field Map
Attachment 2: MOC comments on Chapters 1 & 2 of PAPDEIS March 15 and September 28, 1999
Attachment 3: "Estimation of the Visibility Impacts of the Pinedale Anticline Gas Exploration and Development Project and other New Sources Using Two Different Methods for Visibility Background" by Environ, November 29, 1999 86

LETTER 14

BP Amoco

BP Amoco
Post Office Box 130
Granger, Wyoming 82934
307-872-9200

February 4, 2000

Mr. Bill McMahan
Bureau of Land Management
Rock Springs Field Office
280 Hwy. 191 North
Rock Springs, Wyoming 82901

RE: BP Amoco Comments
Pinedale Anticline Natural Gas Field Exploration & Development Project
Draft Environmental Impact Statement

Dear Mr. McMahan:

BP Amoco Production Company (BP Amoco) appreciates this opportunity to provide these comments for BLM consideration on the Draft Environmental Impact Statement (DEIS) for the Pinedale Anticline Natural Gas Exploration & Development Project. BP Amoco provides the following comments on this DEIS.

General Comments
The Executive Summary states that, "These decisions must accommodate the rights conveyed to the operators in Federal mineral leases and the need to protect important natural resources." "The DEIS documents that it will not be possible to achieve both of these goals in all areas within the PAPA **if the development is extensive** (emphasis added)." "In some areas, development will lead to significant adverse impacts to the environment." "No technically or economically feasible level of mitigation can be applied to these areas to minimize the severity of impacts to less than significant." "By issuing the leases, the BLM no longer has the authority to preclude surface disturbing activities even if the impact of such activity is significant, unless prohibited by law." **"BLM can only impose reasonable mitigation measures upon a lessee** (emphasis added)." "The operators have stated, and the BLM concurs, that not enough exploration has been completed to date to fully understand the development potential of the PAPA."
These sentences, that have been extracted from the DEIS Executive Summary, are the basis for many of the comments that will be provided to the BLM by BP Amoco. The uncertainty regarding the level of gas development that will occur on the project area has

ultimately complicated this analysis and its predictions and portrayal of potential project related impacts. As a result of these uncertainties, the BLM has analyzed resource protection alternatives which may include unreasonable mitigation. The significance criteria developed by the BLM was admittedly arbitrary and "in many cases the significance of the impacts described in this chapter will directly depend on the level of ultimate development". The decision maker must recognize that the PAPA DEIS "may overestimate impacts from this project" and that "for purposes of this analysis, it is assumed that development would occur in all of the SRMZs in the project area, even though much of the project area remains unexplored." Where in all of these statements of uncertainty lies the "rule of reason". While the natural resources found in the PAPA are abundant, none of the resources found in this project area are unique to this area. Standard stipulations were developed to protect the each specific natural resource and without more scientific based information indicating that a greater level of protection is warranted, additional more restrictive mitigation should not be considered for inclusion in this document.

BP Amoco truly understand the abundance of sensitive resources that occur in many parts of this proposed project area. BP Amoco also understands its responsibility to operate in a prudent and world class fashion when developing oil and gas resources in these sensitive environments. Do not mandate in your decision making process unreasonable mitigation based on arbitrary significance criteria, on uncertainties in the level of development, and therefore a potential overestimation of project related impacts.

Chapter 2
Section 2.1, second column, second paragraph.

The DEIS states, "However, the BLM does have the authority to regulate the manner and pace of development of a lease so long as there is no "taking" of rights granted in the lease."
The BLM must remove from this analysis any alternative that suggests as mitigation pacing development (by limiting rig numbers) within the PAPA. Unfortunately , the BLM, in the Resource Protection Alternative (RPA), has identified as mitigation limiting the number of rigs that can be operating at any one time within the PAPA. This resource protection mitigation would be completely unreasonable, arbitrary, capricious, and virtually impossible to manage. As proposed in the (RPA), limiting the pace of development by limiting rigs operating on the project area could violate lease rights, correlative rights, and result in drainage, all making this form of mitigation unmanageable and potentially resulting in a "taking" of lease rights. Pursuant to the case of the Wyoming Outdoor Council appeal of the BTA Bravo Project (147 IBLA 105 (1998)) referenced by the BLM, also stated that it was not demonstrated that, "the alternative of staggered development would have a lesser impact that that considered by

1

2

BLM." Controlling the pace of development as proposed by BLM will not reduce impacts but merely distributes the same level of impacts over a longer timeframe, perhaps resulting in more severe cumulative impacts. 2

Section 2.3.3, first paragraph
The BLM states, "BLM has concluded that limiting the number of well pads to less than 4 per section, **based on what is currently known about the technical limitations of directionally drilling wells** (emphasis added), may result in a taking of lease rights granted to the operators." "The only place in the PAPA where mitigating opportunities in Chapter 4 recommend limiting well pads to less than 4 per section is in sensitive viewshed area near Pinedale." BLM justifies this greater level of protection, which by there own definition could be considered a taking of lease rights by stating, "Because this area is small, likely unproductive (uneconomical), and potential impacts were judged to be particularly severe, BLM was compelled to analyze well pad density at less than 4 wells per section." Here BLM makes assumptions regarding the economical viability of the natural gas resource in these "sensitive viewshed" areas without the luxury of any information. Couple those assumptions with an arbitrary significance criteria, and the BLM has by its own admission proposed a mitigation that will result in a "taking" of the operators lease rights. Areas where BLM is proposing any level of limitation of well locations available on a per section basis should be struck from the content of this analysis. Especially the mitigation limitation proposed for these BLM defined sensitive viewsheds described above. Mitigation decisions should be based on sound scientifically justifiable information, not on arbitrary assumptions. 3

Section 2.4, page 2-6, first column, first paragraph.
This section discusses in length the "potential levels of development" and BLM states, "Based on results of limited drilling in the project area to date, BLM believes that the lower estimate is probably more realistic." The key piece of this sentence is, "Based on results of limited drilling in the project area to date, ...". Until exploration and development is allowed to proceed, it is clearly premature to make statements regarding the level of potential development that might occur on this project area.

Section 2.6, page 2-34, MA 8 - Minimal Conflict Area
In this section of the DEIS BLM states, "Management objective (for this minimal conflict area) is to provide for antelope summer range and migration; protect the Lander Trail viewshed; avoid sensitive soils; and continue maintenance of livestock grazing and trailing operations." "This MA also includes an area on each side of the Hwy. 191 which is classified in the Pinedale RMP as Visual Resource Management (VRM) Class III. This management objected is to partially retain the existing character of the landscape, i.e. measures should be taken to screen activities and facilities so they do not dominate the view of the casual observer."

The discussion relative to the VRM III classification and the interpretation of its management objective must be tempered with the fact that in some circumstances it will be impossible to "screen activities and facilities so they do not dominate the view of the casual observer." This possibility exists in the event some level of development occurs on the south PAPA. BP Amoco clearly understands the concerns that the BLM and the public has relative to this VRM issue. I also believe the BLM understands that implementation of the management objective for this VRM III area, as defined above, could be problematic in a number of cases as it relates to oil and gas exploration and development in this area. I also question the definition interpretation of the VRM III management objective. What is the basis for that definition? BP Amoco would like the BLM to consider in its management of this issue an obvious recognition that the east side of Hwy. 191 (Wind River Mountain viewshed) is likely more sensitive than the west side of Hwy. 191 and that the implementation of this management objective interpretation, if carried forward, be balanced considering this fact. 4

Table 2-8
Number of Rigs Operating - Resource Protection Alternative
See discussion/comment above.

BLM Recreation Sites - SRMZ - Resource Protection Alternative
BLM states, "...well pad density on Federal lands and minerals in the Wind River Front SRMA would be limited to 4 wells pad/section."
As described in Section 3.8.8 of the DEIS, "...this SRMA is managed for dispersed recreation use and is one of the most scenic and predominately unmodified natural environments on a large scale in the BLM's Green River Resource Area." That portion of the Wind River Front SRMA that exists within the PAPA is a small area directly adjacent to Hwy. 191 (not more than 3 miles from Hwy. 191). If this areas management objective was established to offer the public an opportunity for recreation and experience "isolation from the sites and sounds of other humans", people will certainly not experience that sense of isolation adjacent to Hwy.191. BP Amoco understands and appreciates the establishment of this SRMA. However, we do not believe that offering the level of protection described in the DEIS RPA, for the small portion of the Wind River Front SRMA that exists in the PAPA, is appropriate or necessary. The recreation value of this area for an individual seeking "isolation" is lost by the mere fact Hwy. 191, in the PAPA, is directly adjacent to this SRMA. Limiting well pad density in this area is inappropriate for the purposes of protecting recreation value and should not be considered for inclusion by the BLM decision maker. 5

Sensitive Viewshed SRMZ - Resource Protection Alternative
See comments provided above (Section 2.3.3).
Additional comments.
Limiting the number of well pads in a VRM II management zone will not necessarily accomplish visual resource management objectives. If visual resource impacts can be mitigated through some economic and technical means, such that VRM II integrity is maintained, the number of well locations that exist in that VRM II environment should not matter. The management of visual resources should not be accomplished through the limitation of well pad density and references to that concept should be struck from the RPA discussion. Limiting well pad density in this area is inappropriate and inconsistent with BLM VRM requirements and should not be considered for inclusion by the BLM decision maker. 6

Lander Trail - Resource Protection Alternative
The National Park Service (NPS) EIS covering the management of the Oregon and related trails does not offer the Lander Trail a "high potential" site or segments designation. In fact the Lander Trail is not even shown on the NPS EIS maps. The BLM RMP does however offer this trail a ¼ mile buffer from the installation of well locations and visible production equipment. Extending visual impact restrictions, as described in the RPA, would result in the potential for significant loss in natural gas resource recovery and could be considered grounds for a "taking" of federal lease rights. Granting that level of protection for a portion of the Oregon Trails system that has been deemed virtually insignificant by the National Park Service appears to be inappropriate. Extending protection beyond the existing ¼ mile buffer should not be considered for inclusion by the BLM decision maker. The decisions regarding the protection of this portion of the Lander Trail should also be left to the PAPA ROD and should only be carried forward in a Programmatic Agreement if greater levels of protection are afforded this trail in the EIS/ROD. 7

Antelope Crucial Winter Range/Deer Winter and Crucial Winter Range/Moose Crucial Winter Range - Resource Protection Alternative
In Table 2-8 for each of the resource areas identified above the RPA identified mitigation that states, "There will be a maximum of 4 well pads/section in crucial winter range on Federal lands and mineral." "However, up to 16 well pads/section may be allowed if centralized production facilities are constructed so that only emergency trips would be required during the crucial winter period."
BP Amoco clearly understands the critical nature and importance of the winter habitat for deer, antelope, and moose in this area. The BLM must also understand the potential. significant economic burden that such a limitation may place on the operators in this area. BLM should also understand that this economic burden could result in the

operators inability to economically recover the PAPA natural gas resource these SRMZ's. The mitigation proposed calls for the drilling of no more than 4 wells pads/section in these crucial winter habitats. In the event that it was determined that more than 4 well pads/section were necessary to adequately recover the natural gas resource below these defined winter habitats, this must then be accomplished through the use of directional drilling techniques. As stated earlier in this document, "By issuing leases, the BLM no longer has the authority to preclude surface disturbing activities even if the impact of such activity is significant, unless prohibited by law." "The BLM can only impose reasonable mitigation measures upon a lessee." The decision to include this mitigation in the RPA was based on very little actual data regarding the cost of directional drilling of wells specifically located on the Pinedale Anticline. Since this decision, several wells have been drilled on the PAPA that can provide better information about the economics of drilling wells directionally and help the BLM decision maker better determine if this proposed mitigation is "reasonable". To date five directionally drilled wells have been completed on the PAPA. These wells were drilled and the cost information has been provided by Ultra Petroleum, McMurry Oil Company, Questar, and Anschutz. The average increased costs to drill these five directionally drilled wells (spud to rig release) was approximately $655,000 per well. Therefore, lets assume that a section (640 acres) of land within crucial winter range required 8 well bores to maximize the recovery of the natural gas resource. As a result of this proposed mitigation, the operator would then be required to drill 4 of those 8 wells directionally. The total additional expense in that section of land alone would be $2.6 million (based on average increase in cost provided above) and would then result in 14.8 acres less short term disturbance from well pad construction and 6 acres less of long term surface disturbance. BP Amoco is not confident that $2.6 million, in additional expense, to reduce long term well pad surface disturbance by 6 acres is reasonable mitigation. The BLM has admitted in the DEIS at page 2-45 that "economic questions which remain to be answered could make directional drilling unreasonable. If these economic hurdles cannot be overcome, reserves will be left in the ground and maximum ultimate recovery of the reserve would not be accomplished if well pad density is restricted to 4 per section." BP Amoco believes the summary provided above answers several questions regarding the economics of directional drilling on the PAPA. 8 9

The decision regarding the necessity to include as mitigation in the RPA this reduced number of allowable well pads in crucial winter habitat was also made based on results of the Wildlife Habitat Model which is incorporated in the Technical Report for the PAPA DEIS. Interestingly enough this model has not been peer reviewed, published, or field tested. In other modeling efforts that were initiated to evaluate potential resource impacts (i.e. Air Quality Impacts Assessments), a stakeholder group of interested and 10

affected parties was formed to develop modeling techniques and modeling inputs. No attempt to involve a larger group of affected parties was made, but an independent decision was made by the BLM to use a model that has not even been reviewed for adequacy in these types of situations. The model is based on a great many subjective and unproved assumptions and theory. The model has not been field-validated and should be tested under purely research conditions and not used as a basis for the BLM decision maker. In the technical support document the author states, "Clearly these wildlife habitat models are a first step relating wildlife attributes to environmental impacts and should be viewed as working hypotheses, not as definitive solutions to the problem of cumulative impact assessment." Should the results of this modeling effort be the basis for making sound and reasonable decisions to protect these winter habitats and wintering wildlife? BP Amoco believes by allowing a greater level of flexibility in this oil and gas development and greater flexibility in the identification and implementation of protection alternatives for these sensitive resources, that the industry can maximize oil and natural gas recovery while at the same time develop innovative means to protect crucial winter habitat and wintering wildlife. Do not place significant up-front burden on the industry until many of the uncertainties evident from this document become more certain.

10

The BLM in the RPA offers as a potential alternative to limiting the number of well pads per section in these crucial habitats the ability to allow up to 16 well pads/section if centralized production facilities are constructed so that only emergency trips would be required during the crucial winter period. BP Amoco appreciates the alternative that has been presented by the BLM as a means of allowing for a greater number of vertical wells to be drilled in these areas. Unfortunately the centralizing of production facilities also comes with some inherent difficulties. Most of which may be able to be overcome, but certainly at some increased incremental cost. The BLM has stated in this alternative that only emergency trips would be allowed to those locations which feed (produce to) the centralized facility. Under the centralized facility scheme in the western Wyoming environment there would certainly need to be some equipment at the satellite well locations. Things like line heaters and potentially methanol storage would be required for proper operation during the winter season. This equipment must be check periodically to ensure that equipment is functioning and well operations are continuing. This would require more frequent visits to the satellite well locations than believed necessary by the BLM. Because of varied mineral ownership, metering potentially at the individual well locations also may require additional equipment and certainly could require additional visits to the satellite well locations. In summary, this alternate means of allowing wells to be vertically drilled in these crucial habitats may not be feasible if the perceived benefit of limited visits to the satellite well locations cannot be accomplished for the reasons BP Amoco has identified above. Unfortunately this leaves the operator with only the directional drilling option and the potential incremental cost increases which are discussed above.

11

Sage Grouse Leks - Resource Protection Alternative

This mitigation in the RPA states, "Noise from project activities on Federal lands and minerals would be managed near leks while they are actively attended (approximately March 1 to May 15) during the hours from midnight to 9:00 AM so that no more than a 10 dBA increase in background noise occurs at the lek." In Chapter 4 of the document the BLM explains that the male grouse mating display involves an acoustic signal coupled with visual displays so that **constant** (emphasis added) noise could interfere with females attraction to male's displays.

12

The rest of the text in Chapter 4 lists the various noise levels versus distance for a car or pickup, heavy trucks, dozers, and scrapers, drilling rigs and a 26,000 hp compressor station. First, cars, pickups, heavy trucks, dozers and scrapers are not constant sources of noise. The DEIS indicates that at 1,000 feet, the noise level is 47.5 dBA which is less that the 49 dBA proposed limit. As the distance goes to 1320 feet (1/4 mile, the standard avoidance for leks) the level would be less that 47.5 dBA. The data presented in the DEIS then suggests that, for drilling operations, the ¼ mile distance is adequate. The compressor data assumes that all 26,000 hp currently being analyzed would be located at one site which is very unlikely to occur. Although the noise level for heavy trucks, dozers, and scrapers exceed the maximum 49 dBA suggested limit, these sources are not constant and would likely only overlap the proposed time restriction from approximately 6:00AM to 9:00AM. All other listed sources of noise would be at or below the 49 dBA suggested limit at ¼ mile. Another point worthy of some discussion is the basis for the proposed 10dBA limit over background. The documents state that Sublette County nor the State of Wyoming have noise limits and that there are no standards of noise protection for wildlife. The document merely comments that the 10 dBA above background proposed limit is likely acceptable. If there is no scientific basis for this proposed mitigation and therefore the proposed mitigation is arbitrary and capricious, the BLM decision maker should not consider this proposal for inclusion in this EID/ROD.

13

14

The RPA also states, "Up to 4 well pads/section would be allowed in high quality sage grouse nesting habitat. In lower quality nesting habitat, up to 8 well pads/section would be allowed." This would assume that the BLM has identified and mapped the quality of the nesting habitat within the project area and could then manage this mitigation stipulation based on that data. If that information is not available it is difficult for BP Amoco to understand how BLM would manage this stipulation. The basis for limiting surface disturbance in high quality nesting habitat again is arbitrary and the cost implications by potentially requiring directional drilling in these high quality nesting habitats have been discussed above. BP Amoco again understands the sensitive nature of this issue and believes that by allowing some level of flexibility, innovative solutions can be found that again allow for the maximum recovery of the natural gas resource and also protect the sage grouse nesting habitat found in the project area.

15

16

Cultural Resources/Native American Sacred Sites

The RPA alternative suggests a Programmatic Agreement (PA) be put in place to manage cultural resource issues in the PAPA. BP Amoco is very willing to negotiate and participation in the implementation of a PA for the area. BP Amoco does however believe that those negotiations should be taken from the NEPA process and be negotiated, in good faith, independent of the PAPA EIS venue. Any aspect of the PA, Treatment Plans, and Research Designs that would involve the expenditure of operator funds must be developed such that the operators are in full agreement with its content, objective, and potential financial obligations. 17

Chapter 4

Section 4.1.3 - Annual Development Review and Monitoring

This section of the DEIS states, "Monitoring programs would be designed and implemented where appropriate, using the process defined in Appendix F for the Adaptive Management Plan." BP Amoco has many concerns regarding the proposal that has been defined as Adaptive Management Planning. BP Amoco agrees with the concept of continuously modifying management practices in order to allow continued exploration and development while continuing to protect the environment. However, BP Amoco is not convinced that the Adaptive Management Plan as outlined is the most appropriate mechanism to accomplish that goal. The BLM must closely review the plan as proposed and determine if they are comfortable with the level of BLM (and others) effort that will be required to implement this plan. The BLM must also determine if it is comfortable with the proposed process by which a stakeholder group, instead of the BLM, would make land management decisions. BP Amoco is also concerned with statements in the DEIS and Draft Adaptive Management Plan which outline recommended monitoring programs and then goes on to state that "the costs of these monitoring programs will have to be borne by the operators." If information would be collected that not only influences the operators ability to better manage its development program but also provided other agencies with the information necessary to make better land and resource management decisions, the cost for implementing these monitoring programs (if agreed to) should not be borne 100% by the operators. 18

The BLM must also recognize that adaptive management is already being accomplished through existing and to be created committees. Committees like the Transportation Planning Committee is a mechanism by which land management issues can be brought forward and adapted cooperatively, without all of the bureaucracy that is proposed in the Adaptive Management Plan. The plan is far to complicated and far to bureaucratic, as proposed, to be effective. BP Amoco would suggest that the Adaptive Management Plan concept be dropped and that the idea of utilizing issue specific committees, like transportation planning, be continued to satisfy the need for adaptive management.

The BLM also proposes that monitoring be initiated on a number of various resource aspects that are found within the PAPA. Like mentioned above, the BLM is also proposing that the operators be responsible for 100% of the costs for implementing these proposed and extensive monitoring programs. BP Amoco believes that monitoring of resource issues during the development of the PAPA will allow for better land and development management planning. Unfortunately the BLM has proposed far too many monitoring programs to be implemented. I think the BLM, in cooperation with other interested parties, must look at the existing list of proposed monitoring programs and determine which monitoring is most critical to be performed. A prioritization of the proposed list is absolutely necessary. 18

Section 4.10 - Air Quality and Noise

Microscale Modeling

The BLM has stated in this section of the DEIS that, "The incremental risk increase from exposure to benzene at 350 feet from the nearest well is above the designated threshold of 1 in one million for both the maximum exposure and most likely exposure scenarios." Based on BP Amoco's in house review of the analysis and predicted impacts, BP Amoco believes there may be a number of issues in this analysis which could significantly overstate actual impacts. With regards to the modeling in the technical support document, it is unclear with respect to modeling averaging time. BP Amoco is assuming that the reported concentrations represent an annual average. We would suggest whenever concentrations are reported that the corresponding averaging time be stated. Another issue relates to the treatment of calm wind speeds in the modeling. Classical EPA guidance states that calm wind speeds should not be used in modeling. Typically a calm wind speed is defined as a wind speed of less than or equal to 1 meter per second and the resulting concentration is not included in any average concentrations. The HAP analysis reset wind speeds in the range of 0.5 to 1.0 meters per second to 1 meter per second and these were modeled as valid data, as opposed to treating these values as calms. This results in biasing the meteorological data to include more hours of low wind speeds when predicted impacts are greatest. 19

An additional issue with the modeling is that a very simplistic source description was used. Several simplifying assumptions were made which may have a profound affect on estimated concentrations. The first problem is that the modeling neglected to include aerodynamic downwash for the dehydration units and separator. For sources with little momentum or buoyancy plume rise, downwash is an important aspect of plume dispersion. For these types of sources, downwash will provide initial dilution of the plume and will result in lowering estimated ground level concentrations. This additional dilution is a result of turbulence generated from the process units as well as other nearby obstructions.

In an EIS one is dealing with idealized sites for which no detailed site plans are available. Thus, performing a site specific downwash analysis becomes difficult. BP Amoco believes that it is possible to develop a generalized site plan that can incorporate typical structure dimensions so that downwash can be included in the analysis. With respect to identifying structures to be included into the modeling, it is important to include the storage tanks (condensate and produced water). These are very significant structures and are generally located within the area of influence of the emission points.

Another issue is that the modeling co-located all emission points (all emission sources were modeled at a single point). In modeling impacts close to the source, it is important to provide as much information as possible regarding the source locations and physical characteristics of the emission unit. The distance between the separator and the dehydration unit can be very important in accurately estimating impacts, Again, generalized or typical relative source locations could be developed and used in describing emission sources and this would improve the accuracy of the modeling. Another issue with the source description is that the typical release height of the dehydration unit and the separator are very different and this difference needs to be accounted for in the modeling. In summary, modeling of benzene impacts is biased towards overstating actual concentrations.

Another important aspect to consider are the concentration effects. The resulting predicted concentrations were compared against an incremental benzene cancer risk of 1 in a million. This conversion was done using an EPA unit risk factor for benzene. A number of assumptions regarding exposure were made in performing these calculations. Different assumptions were made for the Maximum Exposure Scenario (MES) and the Most Likely Exposure Scenario (MLES). Under the MES it was assumed that a person would be exposed continuously at the modeled levels for a period of 30 years. Given the likely productive life of such wells (9-15 years), as well as the natural decline in production and corresponding emissions, this case overstates the likely risk by approximately three (for a 9-year life) or two (for a 15-year life). For the MLES a 9-year well life was assumed and exposure duration was calculated. While these are appropriate, they need to be justified in the document. It is also recommended that the model concentrations be converted into risk estimates and plotted. Presenting the analysis results in this manner will better inform the reader of the perceived incremental risk.

In conclusion, BP Amoco believes that the hazards or risks predicted are significantly overstated and portray results that are misleading and results that have inappropriately created concern among local area residents. Conservatism has been added by: 1) ignoring the current regulatory mandated controls (MACT and BACT),
2) using a conservative modeling approach (meteorological data and source description) and 3) conversion of benzene impacts into an incremental risk.

19

Visibility Impacts

A review of the visibility modeling analysis reveals several important attributes. The first is that the proposed action, regardless of the development and emission scenario, by itself does not exceed the Forest Service Level of Concern (LOC) of 0.5 dv. The second is that when cumulative impacts are considered, the predicted combined impact is less that 1 dv (0.9 dv) for the maximum impact scenario. There are only nine separate or unique days when predicted impacts are above the 0.5 dv LOC. These conclusions suggest that there is not a significant visibility impact from any of the alternatives (levels of emission control or compression location) considered and as such, visibility and other potential air quality effects should not be considered pivotal in formulating a Record of Decision (ROD) for this project. It is also important to note that this modeling analysis is conservative and is likely to overstate actual impacts. It is recommended that the documents be modified to place the conservative nature of the analysis in proper perspective.

Another way to look at the conservatism in the visibility calculations is to compare the results presented in the Technical Support Document (Method 2) to Method 4 calculations. The Method 4 calculations, for this project, were performed by Environ while under contract to BP Amoco and others. Method 4 provides a more realistic refined analysis when compared to Method 2. It is important to note that Method 4 methodology is consistent with EPA modeling guidelines regarding the use of background concentrations in a refined air quality impact analysis. In such an analysis background conditions are analyzed as a function of the meteorological conditions. There are several other attributes that lend credibility to this calculation procedure. First, because background measurements are made continuously (hourly) a large database is available. Thus for a single year it is possible to record all the variation in background visual range. Secondly, this measurement technique provides a path-integrated measurement (over 1-2 kilometers) and is a direct measure of visual range. This is opposed to the use of the IMPROVE particulate matter (PM) concentration measurements which represent a single point in space and from these data a reconstructed visual range is calculated. Thirdly, the changes in visual range that were calculated in the Method 4 analysis utilize the entire background frequency distribution. Thus, the impact of development was quantified for the cleanest day as well as all other days. Again, this provides additional realism in the analysis. It is important to contrast the Method 4 methodology with the screening calculations (Method 2) that were performed by the BLM and presented in the DEIS. In the Method 2 calculation procedure it was assumed that background visual range conditions remained constant at the 90th percentile level for all days of a particular season. In this context it was assumed that the clan days would occur every day of the year and then the model predicted change in visibility referenced to these clean conditions. These screening calculations present an

19

idealized representation of the calculated change in visual range and these calculations have no physical reality.
Comparison of Method 2 results to Method 4, for the proposed action, show a reduction in projected impacts from 0.46 to 0.34 dv for the 1.5 g/hp-hr emission scenario. This represents a 35% reduction in predicted impacts. For cumulative impacts, the maximum predicted change using Method 2 was 0.91 dv. When using Method 4, the maximum predicted change was 0.61 dv. This represents a 49% reduction in predicted impacts. As demonstrated by this comparison, the use of a constant background level adds yet another level of conservatism to the analysis.

The recent FLAG Phase I draft report, of which the Forest Service is a member, states that the LOC for a single source is 0.5 dv and for a cumulative analysis the LOC is 1.0 dv. Based on these draft criteria, the results of this analysis are within acceptable limits.

It can be clearly demonstrated that the projected impacts for this proposed action both when considered by itself and when included in a cumulative analysis are conservative and have compounding levels of conservatism. Even with this conservatism, impacts are within acceptable limits. In addition, this conclusion can be reached without considering the NOx emissions reductions that were negotiated between Ultra Petroleum and the Naughton Power Plant near Kemmerer, Wyoming.

19

BP Amoco Production Company appreciates the opportunity to provide these comments on the PAPA DEIS. BP Amoco would like to thank the members of the BLM ID Team for their hard work and persistence in getting this document completed and available for public review. While the Pinedale Anticline area has a number of significant environmental and economic issues associated with its continued development, BP Amoco believes that by providing a decision that allows a certain degree of flexibility, development can proceed in a manner which protects the environment and also allows for the maximum economic recovery of the PAPA natural gas resource. BP Amoco hopes that continued persistence will bring about a prompt FEIS and ultimately a ROD that meets everyone's needs and objectives.

Sincerely,

Kirk M. Steinle

Kirk M. Steinle

cc: Mr. Alan R. Pierson
Wyoming State Director
Bureau of Land Management - Wyoming State Office
5353 Yellowstone Road
P.O. Box 1828
Cheyenne, Wyoming 82003-1828

LETTER 15

People For the USA
Flaming Gorge Chapter
P.O. Box 1063
Rock Springs, WY 82902

Prill Mecham, Field Manager
Pinedale Field Office
P O Box 768
Pinedale, WY 82941

Dear Field Manager Mecham;

This letter is to inform you of the concern we have with the continuing attempts to limit the public, business and industry from accessing and using Federal Lands within Wyoming. We support the traditional concept of multiple use which has served our communities, counties and Wyoming so well in the past.

As a result of federal agencies attempting to limit access **to and upon** Federal Lands, we have appointed a committee which will dedicate its time and efforts to reviewing governmental rulings, policies, regulations or attempts to introduce legislation which may further erode our citizenry, business and industry of its ability to access and use the lands and resources held in this state by the Federal Government.

Please include our organization in your "concerned public list" and keep us informed of any changes, proposals or plans which might, or will, affect "public" access **to and upon** the Federal Lands you administer.

Thank you.

5-87

1

Sincerely,

Randy Shipman, President
Flaming Gorge Chapter

cc: Senator Craig Thomas
Senator Mike Enzi
Congressman Barbara Cubin
Governor Jim Geringer

LETTER 16

Conservancy of the Phoenix
P.O. Box 4988
Casper, WY 82604

E-Mail: phxcon@trib.com
Telephone (307) 235-1879
Website
http://w3.trib.com/~phxcon/

CONSERVANCY OF THE PHOENIX

January 3, 2000

Tom Fry
BLM Director
Pinedale Anticline DEIS
1849 C Street, NW LSB-204
Washington, D.C. 20240

Dear Director Fry:

The Conservancy of the Phoenix, Inc. has retained the services of Dr. Jill Morrow, Ph.D., and her knowledgeable compatriot Lance Marrow to assist and represent the Conservancy in matters of environmental concern.

Please be advised that Mr. and Mrs. Morrow have the authority to represent, and speak for, the Conservancy on the matter on environmental concerns. In an effort to be co-operative in the environmental protection process the Conservancy hereby submits these comments.

It is the policy of the Conservancy to make every effort to listen, co-operate, and support the government agencies. We ask you to take a serious look at the destruction of public lands and natural habitat brought forth by poor planning and inadequate consideration of the concerns of nature that have taken place in the past. There is a need to change these policies of the past; we can do better, we must do better.

The Conservancy of the Phoenix is not anti-hunting or anti-public access. The Conservancy works for and supports CONTROLED ACCESS, Effective management, and ENFORCED rules and regulations.

Sincerely,

Reginald D. Atkins
President
Conservancy of the Phoenix, Inc.
A non-profit 501(c)(3) corporation

Conservancy of the Phoenix
P.O. Box 4988
Casper, WY 82604

E-Mail: phxcon@trib.com
Telephone (307) 235-1879
Website
http://w3.trib.com/~phxcon/

Tom Fry
BLM Director
Pinedale Anticline DEIS
1849 C Street, NW LSB-204
Washington, D.C. 20240
Tom_fry@blm.gov

Bill McMahan
Project Manager
280 Highway 191 North
Rock Springs, WY 82901
Bill_mcmahan@blm.gov

5-88

January 11, 2000

Dear Mr. Fry and Mr. McMahan,

I would like to express my concern for the condition of public lands in general and make some comments about how the BLM proposes to manage the Pinedale Anticline. I believe that public land should truly be managed for multiple use but in recent years I have seen that the cumulative effects of many decades of extractive uses on public lands are degrading and destroying the "resource", as you in public land management like to call it. As a biologist I have observed declines in many species of wildlife, degradation/destruction of riparian areas by cattle, loss of fishing opportunities and amphibian habitat, pollution of creeks and ponds with livestock feces/urine, noise pollution caused by pump stations, loss of visual appeal due to huge open-pit mines, monstrous power lines and habitat fragmentation by roads built for all these extractive uses. As a resident of Jeffrey City, Wyoming who hunts, fishs and enjoys the public land year-round I believe that public land management agencies such as the BLM and the Forest Service should re-evaluate their roles as protectors of the lands within their jurisdiction. In light of the cumulative damage that has been inflicted by "resource users" over the years, now is the time for public land managers to stop thinking of the land as a "resource" to be used for extractive purposes such as mineral exploration, grazing by livestock and logging. The lands will heal themselves eventually but they must be given a rest from the constant extractive uses. Instead, I am proposing that public lands be managed as an ecosystem with long-term goals for sustainable, non-destructive uses such as wildlife habitat, open space and recreational uses.

The sage grouse issue is one of prime importance. These birds may very well become listed as Threatened or Endangered under the Endangered Species Act in the next few years. Federal public land agencies must realize how they are endangering the sage grouse and other sagebrush steppe obligate species by failing to consider wildlife needs and continuing to allow special interests to control land management decisions. For example, BLM continues to subsidize livestock grazing on vast allotments throughout the American West. The deleterious effects of grazing are causing all the recent concern over sage grouse in the Green Mountain Common Allotment which is managed by the Lander BLM office. The Lander BLM office is now belatedly trying to improve sage grouse habitat in the allotment by mandating changes in livestock grazing practices specifically aimed at improving the sagebrush steppe and associated riparian habitat zones in hopes of averting the listing of sage grouse.

Another of the reasons for the precipitous sage grouse population decline is habitat fragmentation. Fragmentation can be due to many factors such as power lines, highways, loss of sagebrush due to herbicide treatments, fire, chaining, etc. and other factors, which are not so obvious. For instance, past exploration for minerals on BLM land in the Red Desert has left thousands large holes with adjacent dirt mounds. These artificial dirt mounds which are located in flat topography near sage grouse brood rearing or nesting areas serve as perches for raptors that prey on sage grouse. Thus the activities of man have caused reduction of sage grouse by increasing predation. Another example of how the BLM is allowing fragmentation of the habitat is by issuing permits for installation of a major power line which cuts through the Green Mountain Common allotment. Raptors use the power poles as perches from which they can see and attack sage grouse. Biologists estimate that the habitat for 3/4 mile on **either** side of these major power poles is lost to sage grouse use. The BLM could have prevented this major fragmentation by insisting that these poles be raptor-proofed to prevent them from being used as perches. In the future perhaps public land managers will recognize and take proactive measures to mitigate the damages being inflicted on the fragile lands under their jurisdiction. After all, no special interest groups can use public land "resources" without the consent of BLM management through the permitting processes. BLM offices throughout the American West must change their attitudes and become more eco-friendly. 1

Another example of habitat fragmentation/degradation, more relevant to the Green River Basin is noise pollution. Sage grouse reproduction is so dependant on the hens being able to hear the males booming on the leks that any external noise sources will disrupt or completely destroy sage grouse reproduction in that area. A recent study found that the constant droning noise of traffic on Interstate 80 was interfering with sage grouse for a distance of 5 miles. The BLM should take measures to ensure that any permits they issue for extractive uses on public lands be as unobtrusive as possible. For example the noises produced by pumping stations interferes with sage grouse reproduction by overriding the male sage grouse booming on leks. I could hear one such pumping station booming loudly over a mile away. In windless conditions the booming noises from pumps can be heard over great distances. If these structures must be placed in sage grouse habitat the BLM should insist on noise control measures to lessen their effects on sage grouse. The BLM should be protecting the wildlife and their habitat while still allowing some extractive uses. There must be a balance between special interest groups who seek to make a profit and the public's right to see their public land kept in as natural a state as possible. It would be a travesty to allow all the species (such as sage grouse, sage thrashers, Pygmy rabbit, sagebrush vole, sagebrush lizard, pronghorn antelope and many others) which depend on quality sagebrush steppe habitat be pushed aside and allowed to go extinct because BLM thought that drilling for oil and gas was more important than the biotic communities. 2

BLM should not allow special interests to control land management decisions in the Pinedale area. I urge BLM to protect wildlife and their habitat, open spaces, roadless and quiet places instead of continuing to degrade public lands by allowing drilling, mining, grazing, oil and natural gas extraction until there is nothing left worth preserving. Please keep in mind that those lands belong to everyone (not just the special interest groups) and the BLM is obliged to protect it for future generations.

Sincerely,

Dr. Jill Morrow
For the Conservancy of the Phoenix, Inc.

LETTER 17

Southwest Wyoming Mineral Association
P.O. Box 2783
Rock Springs, Wyoming 82902

Bureau of Land Management
Bill McMahan, Project Manager
280 Highway 191 North
Rock Springs, WY 82901

January 12, 2000

re: Draft Environmental Impact Statement
Pinedale Anticline Oil & Gas Exploration and Development Project
Sublette County, Wyoming

Dear Mr. McMahan;

The Southwest Wyoming Mineral Association would like to thank you for the opportunity to comment on the DEIS. As the representative of numerous oil and gas industry related companies in Southwest Wyoming, we have a strong interest in the outcome of the management of any public lands in Wyoming.

My comments will not recommend any changes, sources or methodologies that are suggested in the third paragraph on the introductory letter of the DEIS. I am not an environmental specialist, but one of several thousand working people that depend on multiple use and mineral development to sustain my life and the lives of thousands of other families directly or indirectly dependent on projects such as the Pinedale Anticline Project.

We realize that the purpose of these studies and documents are to analyze resource impacts and suggest ways to mitigate those impacts. Resources are more than just natural resources. Resources include people, jobs and economic sustain ability. 500,000 people have lost their jobs in the oil & gas industry in the last 10 years. When does the human species become threatened and endangered? When are the working people of Wyoming as important as the plant and animal species? Every mitigating factor imaginable is answered in these environmental impact studies. Yet, after years of study and thousands of dollars, there are continual delays and appeals to every project that is proposed. 1

BLM must listen to and balance various opinions from people and groups who are here to advocate single interests: wildlife preservation, minimizing visual impacts, concerns about potential quality of life impacts on this community, continued employment opportunities, and providing a clean burning fuel for the citizens of this country. However, all of these single interests combine into multiple interests that should have equal standing. These lands were thoughtfully and deliberately designated for multiple use. We do not accept claims that blatant environmental degradation is the result of oil & gas activity. We know that extractive activities may alter parts of our environment, but does not degrade or ruin them. This area is not a national

park, it is not a wilderness area, nor is it a wilderness study area. The Pinedale Anticline is sufficient for cattle grazing, vital for many wildlife species, beautiful to enjoy, provides hunting and fishing, and is potentially rich with natural gas, the Administration's fuel of choice and it belongs to all Americans. I am proud to be part of an industry that can prove economic activity can coexist with environmental protection – not preservation – but protection, and all interests when balanced, can be managed to a win, win conclusion. 1

I urge you to move forward with this project. When the administration can fast track 60 million acres proposed as roadless in a years time, the NEPA review for a few square miles should not take 2 to 3 years.

Thank you,

Betty Wilkinson, Secretary
Southwest Wyoming Mineral Assoc

LETTER 18

1/22/00
To: Bill McMahan/RSFO/WY/BLM/DOI@BLM
cc:
Subject: Pinedale BLM Leases: Public Comment

Mr. McMahan:

Please accept this organizational public comment on the proposed Pinedale leasing project. The HSUS Northern Rockies Office covers WY/MT/ID/ND/SD and Alaska with over 2,300 Wyoming constituents. 1

We are deeply concerned regarding the long term environmental and economic impacts of the proposed Pinedale large scale leasing project. We are especially concerned about the negative ecosystem impacts of the road development and other resource extraction activities.

As a trained agricultural economist, I recognize the value of multiple use lands and resource utilization. But I am observing more federal and state agencies prioritizing short term gain from resource use over the longer term value (and opportunity cost) of maintaining larger roadless or low road density tracts for both highly valued recreation and for animal migration corridors and remote habitat.

Please actively scale back the lease proposal to a level that more accurately reflects the wishes of Wyoming residents and the general public.

Our animal protection organization strongly agrees with the more common sense proposals being offered by other groups like the Wyoming Wildlife Federation. Any BLM public leasing project should include these basic protections:

* Equal or more restrictive operational guidelines or protocols than would be required on public lands leases. 2
* Mandate extensive wildlife exclusion techniques from extraction facilities and waste pits. Require regular monitoring to ensure that all species are being protected. AND include as a cost of operation wildlife monitoring studies or habitat improvements to offset the habitat diminishment's that industrial development will create. 3
* Require centralized processing and loading facilities, minimal well pad density and discontinue any new additional leasing. 4
* Require both periodic (wintering / nesting-birthing-lactaction) vehicle access restrictions. Clearly restrict any off-road creation of undesignated travel routes ("two-tracks") which would encourage further degradation of this important habitat. 5

Please incorporate these publicly requested concepts towards good long-range stewardship of our Wyoming public lands.

Sincerely,
Dave Pauli
The Humane Society of the United States
Northern Rockies Regional Office
490 N. 31st Street # 215
Billings, MT 50101
(406) 255-7161 (f) 7162; HSUSNRRO@aol.com; (P) WildQuests@aol.com

LETTER 19

NORTH AMERICAN PRONGHORN FOUNDATION

1905 CY AVE., CASPER, WY 82604 307-235-N.A.P.F. (6273)

January 22, 2000

Bill McMahan, Project Manager
Pinedale Anticline DEIS
280 Highway 191 North
Rock Springs, Wyoming 82901

Tom Fry, BLM Director
Pinedale Anticline DEIS
1849 C Street NW LSB-204
Washington, D.C. 20240

Re: Comments on Pinedale Anticline DEIS

Gentlemen:

Pursuant to requests for comments regarding the Pinedale Anticline DEIS, the North American Pronghorn Foundation, a not-for-profit conservation organization whose mission it is to "preserve, conserve, and enhance both pronghorn antelope and their ecosystems" does hereby wish to forward the following recommendations:

1) Enlarge the considerations of the impact of such an extensive development as the Pinedale Anticline on indigenous species, in particular, the pronghorn antelope, which to this juncture have not been adequately addressed. Studies to be funded by operators. 1

2) With respect to the first recommendation, baseline data on those areas crucial to pronghorn, i.e. , fawning areas, summer and winter ranges, movement corridors, movement barriers, water resources, etc., should be gathered so as to define these areas and provide for their protection and or mitigation prior to the issuance of additional leases, developments and or road building. Without identifying such areas prior to any additional leasing or other development they cannot be adequately protected nor can they be satisfactorily mitigated after the fact. 2

3) Long term range and game management goals are not clearly delineated for this developement area in the DEIS, nor are mitigations outlined to repair or enhance areas that will be impacted thereby. Before additional leasing is allowed these plans need to be developed and presented for review by wildlife management agencies and departments. 3

4) Man made artificial barriers, i.e., highways, roads, pipelines, fencing, etc., have the effect of fracturing habitat and altering natural movement corridors, almost always to the detriment of the species involved, and this is especially evident with pronghorn. As such, the likely construction of extensive networks of roads linking well sites and the fences which often accompany same pose a great threat to pronghorn if they compromise crucial winter or summer range, fawning areas, or movement corridors.

5) As such, the NAPF would recommend the use of "permissive" fencing, i.e., fences which allow animal passage, rather than "non-permissive" fencing, i.e. , net wire or too high, in all fencing that may be utilized. And further, would recommend that existing fences in the DEIS area be modified to BLM standards for fencing, wherein a smooth wire is used on the bottom strand not to be lower than 9 inches from the ground. 4

6) We endorse the concept of "Development Corridors" which would consolidate the various roads, pipelines, power lines, etc., into narrow right-of ways and thus minimize the types of habitat fracturing and movement barricades alluded to heretofore. 5

7) The density of wells is directly proportional to the total habitat disturbed, and hence we would suggest low densities to minimize the impact of a well site on any given parcel, thus reducing the adverse effects on the resident pronghorn. The use of lateral drilling has also been shown to minimize the necessity of additional well sites. 6

8) The establishment of a monitoring team composed of the various federal oversight agencies, state fish and game department, state DEQ, conservation organizations, and other legitimate stakeholders should be undertaken immediately to track compliance with BLM standards, habitat mitigation, environmental effects, game impacts, etc. 7

9) Vehicular access via newly established roads has been demonstrated to cause dislocations of pronghorn and an increase in harassment and poaching incidents. We would therefore recommend that new roads be abandoned or consolidated after well sites have been connected to pipelines and their use be limited to maintenance or monitoring operations only, with some consideration given to legitimate use by legal sportsmen and other recreationists on certain designated roadways. 8

10) With respect to management strategies to be employed to mitigate the impacts of a development of this scale, we would suggest that the following publications be used as reference materials:

a) Krausman, R. , editor. 1995. Rangeland wildlife. Society for Range Management, Denver, Co. 440pp. ISBN 1-884930-05-0.

b) Lee, R.M. , J.D. Yoakum, B.W. O'Gara, T.M. Pojar and R.A. Ockenfels, editors. 1998. Pronghorn management guides. Pronghorn Antelope Workshop, Prescott, Az. 110pp.

c) Demaris, S. and P.R. Krausman, editors. 2000. Ecology and management of large mammals in North America. Prentice Hall Upper Saddle River, N.J. , USA. 778pp. ISBN 0-13-717422-5.

The N.A.P.F. welcomes this opportunity to comment on this important large scale DEIS and urges you to give due consideration to the comments included herein. In light of the possible adverse impact of such additional development, we would urge that the BLM adopt the Resource Protection Alternative . We welcome the chance to participate or assist in the revision of this DEIS and would appreciate being included as a listed "stakeholder" for the purpose of receiving information regarding the final DEIS. Thank you, and please do not hesitate to contact this office if further assistance is required.

Sincerely yours,

Robb D. Hitchcock
President, N.A.P.F.

Note: Additonal comments are included herewith and should be added to our comments.

cc/BOD, Fry, McMahan, Yoakum, and file.

January 20, 2000

We appreciate the opportunity to present public comments regarding your draft Pinedale Anticline DEIS.A tremendous amount of planning effort was accomplished during this assignment and this is a credit to your public responsibilities.

The North American Pronghorn Foundation is dedicated to sustaining and enhancing pronghorn populations and habitats in Canada, Mexico and the United States. Consequently, we are interested in the final development and implementation of your planning endeavors in the Pinedale Anticline DEIS, specifically how they will be beneficial or detrimental to the welfare of pronghorn now and in the future.

To produce a planning document that will properly identify the needs and values for managingthe lands and biota , plus the human uses of public lands, is awesome to even ponder--let alone attempt to accomplish. We applaud your efforts for this public planning system and welcome the opportunity to provide the following comments and recommendations:

1.Overall Assessment of Wildlife Habitat Management

The draft EIS attempts to provide planning efforts for many species of native flora and fauna, however, we note a significant amount of narrative devoted primarily to endangered and sensitive species. Adequate data regarding other species was woefully lacking. It was most disappointing to us that planning efforts were not sufficient to identify and document needs for sustaining or enhancing rangelands to meet the biological requirements of pronghorn. Then too, the need to identify procedures and practices for other land uses (e.g. livestock grazing, mining and oil or gas exploration, and others) relative to their impacts on pronghorn were limited and at times inadequate. Therefore, we recommend that additional input be provided to meet the biological requirements of pronghorn and the protection of crucial habitats. In addition, we suggest that specific management practices be provided to address the needs of other uses of the land (specifically livestock grazing, mining, and oil or gas developments) that have deleterious effects on the welfare of pronghorn. These strategies are identified in the following publications:

9

10

11

a. Krausman, R., editor. 1995. Rangeland wildlife. Society for Range Management, Denver, CO. 440pp. ISBN 1-884930-05-0. Your attention is called to Chapter 13 which is entirely on pronghorn with emphasis on pronghorn/livestock relationships. Other chapters provide a wealth of data regarding wildlife/habitat relationships on western rangelands (e.g., prescribed burns, revegetation for wildlife, fences and water facilities, and other representative wildlife of rangeland needing management considerations).

b. Lee, R.M., J.D. Yoakum, B.W. O'Gara, T.M. Pojar and R.A ockenfels, editors. 1998. Pronghorn management guides. Pronghorn Antelope Workshop, Prescott, AZ. ilopp. copies are available from the Arizona Antelope Foundation, Inc., P.O. Box 15505, Phoenix, AZ 85060-5501. This concise text lists various practices for pronghorn habitat management. It also provides suggestions relative to coordinating adverse and beneficial effects of land uses on pronghorn habitat.

c. Demaris, S. and P.R. Krausman, editors. 2000. Ecology and management of large mammals in North America. Prentice Hall, Upper Saddle River, NJ, USA. 778pp. ISBN 0-13-717422-5. Chapter 5 is entirely on pronghorn: other chapters on bison, deer, cougar and other wildlife, plus more chapters on the management of western wildlife habitats.

The above three references have dozens of additional literature citations that may be of value and interest to you relative to pronghorn habitat management. If you need assistnce in obtaining any of these literature citations, feel free to contact us and we will be happy to assist you, as we maintain a large library on pronghorn biology and management.

2. Identification of Crucial Habitats

We recognize that an EIS does not contain all the components necessary to manage habitats for wildlife. However, the EIS should identify major elements that are needed to be incorporated into subsequent activity plans. For pronghorn, and certain other wildlifef a paramount management strategy is the identification and delineation of crucial habitats: for pronghorn these include fawning areas, key winter rangelands, and seasonal movement corridors. There may be others. Lack of documentation for these crucial habitat sites fails to provide information needed by land stewards to adequately manage these key areas impacted by other uses (for example, an abundance of various nutritious, succulent forbs are needed on fawning areas grazed by livestock).

12

13

We note that you made management recommendations for some fawning area,similar recommendations are needed for pronghorn.

14

3. Managing Forbs and Shrubs

Forbs and shrubs are the major forage classes ingested by pronghorn throughout the year f or rangelands in healthy ecological status. Although not always recognized in past management programs, forbs are preferred and consumed in larger quantities than any other forage class in the grassland biome, and are basic

15

to providing seasonal high quality nutrition for does during pregnancy and lactation (see Krausman 1995, Lee et al. 1998, Demaris and Krausman 2000). Shrubs (and forbs when available) are nutritious during winters, therefore, they can be related to pronghorn survival during this season of high mortality.

Forbs and shrubs are likewise extremely important to other wildlife as forage and protective cover: e.g., sage grouse, deer and many species of songbirds. Because forbs and shrubs are not generally managed for forage for bison and livestock, the values of these forage classes need to be recognized and incorporated in rangeland management plans for the needs of wildlife. The future abundance of many wildlife species will be related to whether or not abundant stands of forbs and shrubs are sustained in healthy ecosystems on public rangelands. 15

4. Water Availability and Distribution

High density pronghorn populations on grasslands are associated with available free water for drinking every two miles-- a criteria similar to livestock management. Because not all water development projects designed for livestock properly provide drinking water for pronghorn and other wildlife, we urge you to note water development specifications that can serve both wildlife and livestock. Then too, some water development projects can be designed specifically to meet the needs of wildlife. Construction specifications and rational for these various water developments to benefit pronghorn and other wildlife are provided in the three references listed earlier in this report. 16

Because the majority of water developments constructed on western rangelands are accomplished with the primary objective of enhancing water for livestock, it is important to evaluate how these projects affect wildlife. Past research document that certain water developments for livestock have become traps resulting in sage grouse mortality: other projects have had the waters turned off when livestock no longer use the rangeland leaving pronghorn and other wildlife, accustomed to readily available drinking water, without water for physiological needs.

5. RANGELAND FENCE SPECIFICATIONS

It is recognized that the majority of fences are built on western rangelands for the management of livestock. How these fences affect the welfare of pronghorn is directly related to how the fences are designed. Fences can contribute to the mortality of pronghorn during the winter when animals are in poor physical condition and weather conditions are adverse. Pronghorn have not adapted over centuries to the need to jump over obstacles on open rangeland. Fences, consequently may restrict the animals 17

traveling from deep snow areas to sites where forage is more readily available--thereby becoming a man-made facility contributing to pronghorn mortality. We note you have part of one page devoted to this subject in the draft EIS, however we believe it does not adequately cover this potential man-made mortality factor and recommend more specific management strategies be included in the final EIS. To not accomplish this objective would be tantamount to negligent management, for the EIS Management Plan condones hundreds of miles of fences for livestock and highways. Fences with the bottom smooth wires 18 inches above the ground and "let-down panels" are potential mitigation measures. Fences should be constructed according to site specific needs identified in the recommended three references cited earlier in this report. 17

SUMMARY

Pronghorn have specific requirements for habitat. The abundance and distribution of pronghorn populations is directly correlated to the quality and quantity of habitat characteristics to meet their biological requirements for reproduction and survival. When strategic plans document and implement these habitat factors--then pronghorn can flourish. It is with this knowledge that we encourage you to make sure that the needs and values of natural resources and the other uses of the landscape by humans are recognized and enhanced to meet the habiat requirements of pronghorn and other wildlife. We have attempted to call your attention to some of these needs. We have also provided literature that lists greater details so that you can evaluate and incorporate justifiable management decisions for productive wildlife populations on public lands. Again, we have a large library of references on the management of pronghorn and their habitats, and we will be happy to help provide you needed references to make the final EIS a highly creditable planning program for the Pinedale Anticline DEIS. Pronghorn numbers in the United States have decreased more than 33 percent during the past decade--an alarming decrease during modern times. Federal agencies responsible for the management of western rangelands need to make sure though the development of Management Plans that the public's pronghorn populations are perpetuated in healthy numbers on public grasslands in healthy condition. 18

LETTER 20

Dennis J. Brabec, President
Wyoming People for the USA
P. O. Box 41
Big Piney, Wyoming

January 25, 2000

Mr. Bill McMahan
Pinedale Anticline Project Manager
Bureau of Land Management
280 Highway 191 North
Rock Springs, WY. 82901

Re: PINEDALE ANTICLINE OIL & GAS EXPLORATION & DEVELOPMENT PROJECT

Dear Mr. McMahan

Wyoming People for the USA appreciates the opportunity to comment on the proposed Pinedale Anticline Oil and Gas Exploration and Development Project and supports the orderly exploration and development of the petroleum resources with adequate mitigating procedures to be followed for the protection of other resource values as proposed with the standard stipulations.

National gas is the preferred fuel due to its clean burning characteristics and Sublette County is blessed with the deposit of the resource in large and economic quantities. I attended the Public Hearing and listened to all of the comments presented. I am a resident of Sublette County in Big Piney and have lived here working in the petroleum business, specifically in drilling operations, for the past 12 years. I know the resource can be recovered in a manner to protect the other resource values with maximum efficiency and upon completion of the project in 20 to 30 years the area can be restored to its original condition or with improved forage and ground cover with proper reclamation. The impact on the wildlife we have observed in the Big Piney/LaBarge Area has been minimal with more dense activity than that planned for the Pinedale Anticline. The deer numbers in the Big Piney area are now near the objective after the disastrous over hunting and severe winter kill of 1991-1992 with increased drilling activity in the subsequent years by all of the operators in the area. Proper implementation of mitigation measures and cooperative efforts by the operators, wildlife managers, ranching activities, archeological concerns and recreationists will insure the continued multiple use of the area with the protection of all resource values. 1

I have lived in and around Wyoming since 1950 and I am very familiar with the economic value the petroleum industry brings to an area in jobs and tax revenues. Sublette County receives approximately 85% of its total revenues from petroleum and Wyoming receives approximately $485 million per year from oil and gas. The school buildings in Sublette County are the results of revenues form the petroleum taxes and prior to the state controlling all of the school finances Sublette County was divided to provide additional funds for the Pinedale School District. The development project proposed South of Pinedale has prompted a "not in my back yard" syndrome was expressed by a few local Pinedale citizens. Mr. Pape's presentation at the hearing referred to the continued orderly development of the petroleum resources to provide jobs in the area for our people and the revenues to support the local communities. Wyoming People for the USA supports the preferred alternative for the orderly development of the petroleum resources in conjunction with the other multiple resource uses or implementation of mitigation measures, when necessary, as required in the standard stipulations.

Sincerely,

Dennis J. Brabec, President
Wyoming People for the USA

LETTER 21

Working Today for Wildlife's Tomorrow!

January 28, 2000

Bill McMahan, BLM
Rock Springs, Wyoming

Re: 1793 (930)
Pinedale Anticline

Dear Bill:

The Wyoming Wildlife Federation (WWF) appreciates the opportunity to offer comments on behalf of our members on the Draft EIS for the Pinedale Anticline Natural Gas Field Exploration and Development Project.

The WWF is the largest and oldest conservation and sporting organization from Wyoming, working on behalf of hunters, anglers, and wildlife enthusiasts since 1937.

5-95

Character of the Project Area

We are fully aware of the gravity of this proposal to industrialize a significant portion (nearly 200,000 acres) of the magnificent Green River Basin. Per acre, this proposed Project Area may have more scenic, wildlife, and recreational values than did any proposed industrial project area in the entire region. Because of this, we hope that the deciding and cooperating agencies heed the past and anticipated biological impacts that this project, and other human activities throughout the basin, have on these world-renowned values.

Past impacts of human activities in the Green River Basin have resulted in the extirpation of the bison, black-footed ferret, wolverine, most prairie dog colonies, gray wolves, desert elk, most populations of bighorn sheep, lynx, grizzlies, swift fox, most populations of native cutthroat trout, trumpeter swans and whooping cranes, and the decline of neotropical songbirds, mountain plovers, reptiles, amphibians, and the near elimination of long-distance migratory routes for terrestrial megafauna. Due to decades of overgrazing of livestock, inappropriate land use, and the absence of natural fire cycles throughout the basin most of the mountain shrub communities are either decadent or dead and exotic and noxious

P.O. Box 106 • Cheyenne, Wyoming 82003 • Phone 307-637-5433 • Fax 307-637-6629
Wyoming Affiliate of the National Wildlife Federation

Working Today for Wildlife's Tomorrow!

weed infestations are prolific. The sagebrush and other steppe shrubs are in the same poor shape for the same reasons.

The Green River Basin is crisscrossed with roads, power lines, and livestock- and right-of-way fences which have a significant adverse impact to wildlife. Private lands are being subdivided and developed into housing tracts at an alarming rate. Hundreds of thousands of acres of public and private lands are included in a myriad of industrial projects including oil and natural gas production, electrical generation, mining of trona, bentonite, gravel, and coal.

Despite suffering many of the same degradations due to human alterations of the landscape, the lands within the Pinedale Anticline Project Area (PAPA) still possess remarkable wildlife and scenic values. In fact, it is in comparison to the rest of the Green River Basin and the degradation that much of those lands have suffered that makes the PAPA so valuable to wildlife and recreation. "The (Pinedale Anticline Project Area) is best characterized as currently undeveloped...." (DEIS p. 4-1).

Further on, in a poignant and candid admission, the DEIS foretells the impending loss of something of great value to America: "Open space and solitude best describe the feeling one gets when traveling through most of the project area. Some of the area is inaccessible by vehicles and when one walks away from one of the few roads in the area, it is difficult to find evidence of human activity. The views from most of the project area, particularly the Mesa, are exceptional. To the east is the celebrated Wind River Range and to the west the Wyoming Range.....But wherever development does occur, these characteristics of the landscape will be lost." (DEIS p. 4-31)

The recreational opportunities in the proposed project area are many: Fishing, hunting, ORV use and snowmobiling, hiking, picnicking, mountain biking, horseback riding, skiing, wildlife viewing and photography, antler gathering, and sight seeing.

The PAPA also serves as crucial winter range for mule deer, pronghorn, moose, and year-round habitat for a regionally declining sage grouse population (DEIS p. 3-78). A host of small game, furbearers, waterfowl, songbirds, amphibians,

P.O. Box 106 • Cheyenne, Wyoming 82003 • Phone 307-637-5433 • Fax 307-637-6629
Wyoming Affiliate of the National Wildlife Federation

raptors, and a wealth of non-game species also find habitat in the project area. (DEIS pp. 3-78 to 3-81)

It's clear that this proposed project area is unique among all others in the region for wildlife and wildlands values.

Purpose And Need For This Project

Frustratingly, the BLM continues to offer the public an inadequate contextual presentation to justify additional industrial projects on large tracts of public lands. In the DEIS at 1.3 "Purpose and Need", the reasons given are that development is needed to obtain revenue for the federal government and to "guide national policy toward energy security, economic expansion, and greater protection of the environment." However, the statement does not nearly go far enough to offer the public definitions or adequate representations of what "energy security" is or what sources are available to meet America's energy needs.

5-96

The obvious question that arises when offered the reason of "national energy security" for rampant development of this nation's energy supplies, is: Just what strategic benefit accrues from developing and thus depleting this nation's limited natural gas and oil reserves? Wouldn't it behoove America, should a world conflict arise again that restricted foreign supplies, to keep all the domestic energy reserves we have (meager that they are in comparison with other countries') in case they are someday sorely needed? And the obvious follow-up question is: Given that estimates of domestic reserves of oil and natural gas may last for only several decades or more at anticipated consumption levels, what happens then?

1

In the DEIS at Table 4-1 it reads, "There is no evidence of a world glut of natural gas. To the contrary, markets are available for all of the gas produced from the PAPA..." The BLM misses the most salient point of "need" if it confuses the marketability of a product with the essential requirement of that product. A number of examples of popular markets for products that are not a necessity either because of the inherent nature of the product, or of supplies being more

P.O. Box 106 • Cheyenne, Wyoming 82003 • Phone 307-637-5433 • Fax 307-637-6629
Wyoming Affiliate of the National Wildlife Federation

convenient elsewhere. Timber harvested off public lands in the western states comes to mind as being not an absolute necessity due to the availability of private land timber more efficiently grown on tree farms, particularly in the southeast. Another example would be the recent public frenzy over the toy called "Pokemon", which certainly speaks to a strong market, but not a necessity. Markets do not define the "need" for a product.

The DEIS at p. 4-16 ascribes the value of $1.70 for the sale price of one thousand cubic feet (mcf) of natural gas. Some years ago, the price for the same amount of gas was near $4 mcf. Considering the inevitability of inflation over the years, it is astonishing that producers are able to stay in business selling the public's non-renewable resources at such a pittance. It is not difficult to surmise that the only way that this is even remotely possible is that the BLM effectively subsidizes the lease holders and operators by offering cheap leases and minimal protective requirements that enable multi-national corporations to still gain exorbitant profits off the public's resources. The public is selling off it's non-renewables at too cheap a price considering the inevitability of the depletion of these resources , and the cost in damaged public lands and wildlife values.

1

The BLM in this and other similar documents may feel it is simply complying with public policy by facilitating theses huge industrial projects on the public's lands, but only the American public forms policy by making their wishes known to decision makers and their law makers, and that is best done with adequate information at hand. Merely referring to two websites in small footnotes (DEIS p. 1-5) does not do justice to the obligation to adequately inform the public.

Some of the answers and resources that the BLM needs to include in this and similar documents include:

1) Offer the public easy to read and up-to-date graphs, charts, and explanatory text about where America's energy supplies come from, as well as what percentages of our total energy usage is from coal, oil, natural gas, hydro, nuclear, and alternative energies such as wind, solar, and compost or waste incineration;

2) The public also needs to know how domestic energy production and consumption compares to foreign production and consumption, and how much (of all our energy sources) we obtain from foreign countries;

P.O. Box 106 • Cheyenne, Wyoming 82003 • Phone 307-637-5433 • Fax 307-637-6629
Wyoming Affiliate of the National Wildlife Federation

3) What are the estimated recoverable reserves of oil, natural gas, and coal in the U.S.? The world?

4) Will the U.S. ever be self sufficient in any of our energy sources? When, or why not? For how long?

5) Where are existing operational natural gas fields within the United States, and what are their expected lives and production?

6) If those fields were to be fully utilized, when would additional fields (such as the Pinedale Anticline) be needed?

The BLM document, "Oil & Gas Activity on Wyoming Public Lands" (Unknown date, from BLM State Office in Cheyenne; contact Rob Coleman [307-775-6193]) is a good start for easy-to-read graphs and charts, but it does not go far enough to answer some of the most basic questions needed for the public to decide if this type of development on the Pinedale Anticline is in fact even necessary.

All of the necessary information to adequately inform the public about the above topics is available by moderate research on the internet. It is the job of the BLM as lead agency on this EIS to facilitate the information gathering and to present it in appropriate fashion to the public.

1

5-97

Natural Gas In Perspective

Table 5-1 in the DEIS offers the public a small glimpse of a larger perspective that is needed to make informed comments and decisions. This table relates the abundance of other natural gas projects in southwest Wyoming that are either on-line, or about to be. Without the well tally from the PAPA (700) or the nearby Bridger-Teton (20 wells in a reasonable, foreseeable development scenario), *there are nearly 7,000 wells permitted and yet to be drilled in existing or permitted fields.* And this is just in southwest Wyoming.

The proceedings of the Second Annual Wyoming Gas Fair, 1998, Jackson, Wyoming, offers information from the federal Department of Energy listing the intermountain region of Wyoming, Idaho, Colorado, Utah, and Montana possessing a mere 18% of the continental United States' reserves. Most of our natural gas

P.O. Box 106 • Cheyenne, Wyoming 82003 • Phone 307-637-5433 • Fax 307-637-6629
Wyoming Affiliate of the National Wildlife Federation

supplies in the lower 48 states lie elsewhere like Texas, Oklahoma, Louisiana, California, and Appalachia. This would indicate that the public should have a choice in where natural gas fields should or should not be developed, especially on public lands. Presumably, some areas would be less environmentally sensitive than others.

2

The DEIS assumes that the Pinedale Anticline may be the site of as many as 500 to 700 productive gas wells over the life of the project (DEIS @ Table 2-1). It also assumes, for the purposes of estimating royalties and taxes resulting from gas production, that each "typical well" will produce 2 million cubic feet of salable natural gas per day (2 MMCFD). The average between 500 and 700 is 600 wells. Now figure that if those 600 wells produce 2 MMCFD, it adds up to 1.2 billion cubic feet per day of production or 438 billion cubic feet (bcf) per year (1.2bcf X 365= 438bcf). If those 600 wells can produce for 10 or 15 years each (DEIS @ Table 2-1) that totals from 4.38 trillion cubic feet to 6.57 trillion cubic feet of gas produced during the estimated life of all the wells in the Pinedale Anticline Natural Gas Field.

U.S. consumption of natural gas is at or about 24 trillion cubic feet per year (proceedings of Second Annual Wyoming Natural Gas Fair, Jackson, Wyoming, Sept. 24-26, 1998). Given this rate of consumption, the entire life of the Pinedale Anticline Project would supply the United States with from 66 to 99 days worth of natural gas. A little more than 2 to 3 months worth. Less if America's consumption increases or if fewer productive wells are drilled.

This is some of the perspective the BLM needs to offer the public in an analysis of the impacts of large industrial projects on public lands, rather than just the estimated amount of dollars to be gained, in order for them to compare costs and benefits on the appropriate grand scale.

Imagine, from the public's perspective, offering comments on proposals to ravage literally hundreds of thousands of acres of public lands, project after project, when the projects might not even be necessary (for instance when natural gas can readily be obtained elsewhere), or when the trade off in relatively paltry production balanced against irreplaceable wildlife and wildlands resources lost is simply not worth it.

1

P.O. Box 106 • Cheyenne, Wyoming 82003 • Phone 307-637-5433 • Fax 307-637-6629
Wyoming Affiliate of the National Wildlife Federation

Staged Development

The membership of the WWF and the American public are dissatisfied with the loss of their BLM administered public lands to the ravages of oil and gas development. In the past few decades literally hundreds of thousands of acres of previously non-industrialized landscapes throughout the western states, and particularly in Wyoming, have been roaded, drilled, and strung with powerlines, pipelines, and industrial facilities in a haphazard manner. No consideration is given by the BLM for the cumulative impacts of such landscape alteration across such vast spatial scale. Nor are these enormous impacts being sufficiently mitigated.

The WWF, along with other organizations, has long advocated for staged development of our BLM lands for resource extraction. We strongly urge the BLM not to continue to develop these treasured public lands in the same haphazard manner until a systematic plan is developed that identifies recoverable hydrocarbons and minerals throughout appropriate public lands, and a plan to recover those hydrocarbons and minerals in as small an area as meets the nation's needs at a time, and not to industrialize other lands without restoration of the lands impacted has proceeded. A programmatic series consisting of development of the smallest segments possible of public lands followed by restoration would avoid the vast landscape destruction that is current BLM protocol. Leasing and seismic exploration of BLM lands should also follow staged, sequential patterns. Only in this pragmatic manner can the cumulative impacts of industrial development be identified and possibly effectively mitigated.

5-98

1

Air Quality

It is common knowledge that the Green River Basin is bordered on the east and to the north by the largest and purest combined class I & II airshed in the continental United States. These designated Wilderness areas and National Parks (the Bridger, Fitzpatrick, Teton, Popo Agie, Gros Ventre, and Washakie Wildernesses; Grand Teton and Yellowstone National Parks) total approximately six million acres of cherished public lands. Indisputably, these are some of America's greatest examples of our public lands heritage.

P.O. Box 106 • Cheyenne, Wyoming 82003 • Phone 307-637-5433 • Fax 307-637-6629
Wyoming Affiliate of the National Wildlife Federation

Working Today for Wildlife's Tomorrow!

Unfortunately, industrial development in the lowlands of the Green River Basin, which are largely managed by the BLM, is having an adverse impact on air and water and visual quality within the pristine lands "downwind". Nitrous oxides, sulfur dioxide, volatile organic compounds, and airborne particulates all result from industrial activity in the basin, and all have an adverse impact on air and water quality in and around the basin.

Fortunately, at least one pro-active agreement among industrial operators serves as an example of "doing the right thing" to protect Wyoming's air and water. As detailed in the DEIS (p. 5-20), "Ultra Petroleum in cooperation with Pacificorp participated in the purchase of Low Nox Burner Technology (LNBT) controls for Unit 3 of the Naughton coal-fired generating station located near Kemmerer in southwest Wyoming..... (T)he LNBT control is expected to result in approximately 2,000 TPY (tons per year) reduction in Nox emissions from Unit 3 of Naughton."

The Wyoming Wildlife Federation applauds this example of industry's effort to "go beyond the requirements" to strive for amelioration of adverse impacts to the public's cherished wildlands resources. We stand ready to assist in any manner possible to continue this example by Ultra Petroleum and Pacificorp to help keep Wyoming beautiful.

Unitizing And Consolidating Leases

Figure 4-2 of the DEIS ("Non-contiguous Parcels Included in Federal Leases WYW131904 and WYW18039), along with pertinent text on p. 4-10, emphasizes the haphazard results of current BLM and State of Wyoming leasing protocol which allows leasing of non-contiguous parcels in the same lease.

Leasing relatively small non-contiguous parcels to a company that does not hold adjacent leases, or where the adjacent parcels have different lease expiration dates, exacerbates surface damages and cumulative impacts to a project area by increasing the numbers of industrial facilities. Often, the company has no choice to "hold" a certain lease other than to drill on it because of certain timing limitations. It is, of course, appropriate to instill timing limitations for a leased right. However, in the cases where the lease falls within a proposed project area, and exploration or development of the area is imminent, adjustment of timing

P.O. Box 106 • Cheyenne, Wyoming 82003 • Phone 307-637-5433 • Fax 307-637-6629
Wyoming Affiliate of the National Wildlife Federation

limitations, and combining subsurface drainage efforts by more than one leaseholder may in fact result in less impact to other resources such as wildlife, scenic, or recreational values.

The solution to this problem, and one that we support, would be to undertake a program of "blocking up" leases over a period of time and facilitating the "unitizing" of adjacent leases by the various operators themselves. This may involve allowing some leases to go unleased for a period of time to allow the timing requirements of adjacent parcels to also lapse, and then to offer adjoining parcels in the same auction with the intent of decreasing the anticipated number of industrial facilities needed to develop and produce hydrocarbons from these lands.

In a proposed project area such as the PAPA where surface and subsurface rights are owned or managed by different agencies or individuals, the BLM, as lead agency and the largest land manager, should facilitate coordinated leasing agreements among parties, including the state and federal governments, which result in more efficient protection of the multitude of additional resources. Leasing scattered, non-contiguous parcels to a variety of entities resulting in additional surface impacts should be addressed and eliminated wherever possible. 3

5-99

Withhold Leases

The DEIS at 5.2, "Withholding Federal Minerals From Leasing", explains that currently unleased and expired leases on Federal lands and minerals within the project area, as well as along the Wind River Front, the southern Gros Ventre Range foothills, and Hoback Basin will be withheld from oil and gas leasing until this EIS is complete. We heartily endorse this decision from the BLM State Director's Office. We also hope that in the not-too-distant future that these same lands as well as all lapsed or unleased tracts throughout the basin will be indefinitely withheld from leasing due to the overwhelming amount of federal public, state, and private lands in the Green River Basin that are under industrial lease and production. 4

P.O. Box 106 • Cheyenne, Wyoming 82003 • Phone 307-637-5433 • Fax 307-637-6629
Wyoming Affiliate of the National Wildlife Federation

The DEIS at figure 5-1 shows a map of some of the industrial projects in the basin, clearly indicating that industrial activity from west to east across the basin has nearly, and may soon completely, cut off the capability of north-south movement through the basin across non-industrialized or otherwise unimpeded public lands by pronghorn, mule deer, elk, and other terrestrial megafauna. 5

Clearly there is already too much industrial activity in this basin to maintain the wildlife, scenic, and recreational values.

Resource Protection Alternative

It is clear that, if this proposed project is destined to go forward in whatever magnitude, that the "Resource Protection Alternative on All Lands and Minerals" (DEIS @ 2.7.3 and Table 2-8) would be the least harmful to the wildlife, recreation, and wildlands values in and around the project in comparison to the other development scenarios. We recognize, however, that even this development scenario does not adequately protect all the wildlife, scenic, and recreational values. Therefor, we strongly recommend that in addition to implementing the Resource Protection Alternative on All Lands and Minerals, the BLM decide to limit the number of well pads per section to no more than one, especially in:

1) Crucial antelope winter range;

2) Winter and crucial mule deer winter range;

3) Moose crucial winter and year-long range; 6

4) Sage grouse nesting habitat;

5) Sensitive Resource Management Zones (SRMZ's)

The limiting of one well pad per section is very controversial. However this scenario does not limit the operators to only one well per section, as they may directionally drill more than one well from a centralized well pad. "The BLM's Reservoir Management Group (RMG) concluded that there are no geologic or physical reasons to preclude directional drilling in the project area." (DEIS p. 2-46) 7

P.O. Box 106 • Cheyenne, Wyoming 82003 • Phone 307-637-5433 • Fax 307-637-6629
Wyoming Affiliate of the National Wildlife Federation

We also ask the BLM to require the operators, where possible, to install Centralized Production Facilities (CPF) during construction of the production facilities in the project area. "Perhaps the biggest environmental advantage to the CPF option is the elimination of the need to inspect each well pad on a daily basis and to haul condensate and water from the (well pad) locations.... This..... significantly reduces the impacts to wintering big game....." (DEIS p. 2-48).

BLM Can Regulate Development

Also, the BLM should try to further reduce the adverse impacts of this proposed industrial project because, "....many of the impacts could be significantly reduced by slowing the pace of development," and "(the) BLM *can* regulate the manner and pace of development." (DEIS p. 2-43)

Additional Mitigations

5-100

There are several "Additional Mitigation Measures" (DEIS @ 4.19.4) which should all be implemented. They include:

1) Minimize wildlife poaching by avoiding firearms at worksites and supplying operators and employees with state and federal game laws;

2) All motorized equipment should be adequately muffled;

3) Squatting by employees should be eliminated by operators;

4) The WGFD should make available and publicize a reward leading to arrest and conviction of wildlife poachers;

5) Industrial roads should not be available to the public;

6) No dogs at the worksites;

7) Utilize wildlife habitat models to identify needed road closures in the project area, and to identify and implement effective reclamation of industrial sites;

8

P.O. Box 106 • Cheyenne, Wyoming 82003 • Phone 307-637-5433 • Fax 307-637-6629
Wyoming Affiliate of the National Wildlife Federation

Working Today for Wildlife's Tomorrow!

8) Permanently close the south end of Mesa Road (State Hwy 351 to BLM Road 5106) to protect antelope, mule deer, and sage grouse. Seasonally close BLM Road 5106 to protect wintering mule deer and strutting sage grouse;

9) Construct all roads to standards that minimize vehicle speeds and surface disturbances;

10) Fence out livestock from reclaimed sites, but allow use by wildlife;

11) Improve or build new watering sites for use by wildlife where wildlife habitat models indicate it would be appropriate;

12) Do not build pipelines or roads through locally limited vegetation types such as aspen and mountain shrub communities;

13) Powerlines should be buried;

14) If industrial roads must be plowed in the winter, make sure there are escape openings at regular intervals for wildlife use;

15) Industrial activity, including well site visits, in big game wintering areas should be limited to mid-day to minimize disturbance during principal feeding hours and periods of high thermal stress;

16) Do not place roads or facilities in sage grouse nesting habitats with high probabilities of suitability;

17) Where needed, and where no adverse impacts to strutting grouse occur, the WGFD, BLM, and operators should evaluate and place nesting sites for ferruginous hawks and golden eagles;

18) All fences within the project area should be evaluated and adjusted for ease of mule deer and pronghorn passage;

19) Waste pits should be netted where they may pose a hazard to songbirds and waterfowl;

8

P.O. Box 106 • Cheyenne, Wyoming 82003 • Phone 307-637-5433 • Fax 307-637-6629
Wyoming Affiliate of the National Wildlife Federation

20) Fugitive dust from use of roads by operators should be effectively controlled by operators;

21) If on-site mitigation of adverse impacts to wildlife is not complete, the operators should establish a compensatory mitigation fund to replace lost wildlife habitat at off-site locations to be determined in consultation with agency biologists and conservation groups. The operators should work with conservation groups to establish the administration of such a program. This mitigation fund could be along the same lines as the "Surface Damage Payments" made by industry to the State of Wyoming and grazing permittees on state lands where industry operates as reparation for direct loss of livestock forage and for disruption of operations to the livestock permittee. Direct loss of forage from industrial activity also impacts wildlife, and it also adversely affects the functionality of habitat, and impacts wildlife enthusiasts and hunters who utilize wildlife both consumptively and nonconsumptively. Industry has a direct and adverse impact on all this and should be held financially accountable; 8

22) An opportunity for industry mitigation could be a program to address adverse impacts throughout the region to big game migrations; e.g., the added impacts to migrating mule deer and pronghorn from recent housing development along Hwy 191 between Pinedale and Daniel;

23) Expired leases within the project area should not be reissued especially in crucial wildlife habitat.

24) Pit liners (referred to @ DEIS p.2-19) should be removed at the time of reclamation and properly disposed of outside the project area; 9

25) Low profile storage and collection tanks should be used throughout the project area. 10

Monitoring for the Life of Project

Additionally, monitoring of the progress of the project and the adverse impacts to the scenic, wildlife, and recreational values is needed for the life of the project. Therefor the following actions (DEIS @ 4.19.5) are needed:

5-101

P.O. Box 106 • Cheyenne, Wyoming 82003 • Phone 307-637-5433 • Fax 307-637-6629
Wyoming Affiliate of the National Wildlife Federation

Working Today for Wildlife's Tomorrow!

1) Monitoring programs should be financed by the operators; Ultra Petroleum has already helped finance three ongoing and very important studies in the region involving sage grouse, mule deer, and pronghorn antelope, in cooperation with federal and state agencies and the University of Wyoming. There are maybe 30 or more other operators in this particular project area that need to step up to the plate and help fund a multitude of study and monitoring efforts to be conducted by agencies and academics. Some of the PAPA operators are among the wealthiest in the region and the nation. Some are well known multinational corporations. This project area contains some of the last remaining relatively untrammeled sagebrush-basin-steppe biomes on the continent. These corporations, who stand to gain many millions of dollars from exploiting this valuable area, need to offer substantial resources to fund mitigation projects, studies, and monitoring efforts. Ultra Petroleum, a small independent operator, has answered this need, but so much more is called for. The many other operators are long overdue in adequately answering this call.

2) GIS data and biological information should be continually updated in order that modeling can be used with the latest information and so that all agencies, companies, organizations, and the public can avail themselves of current information; 11

3) BLM should require operators to submit all locational information for their facilities in a format compatible with GIS analysis;

4) BLM and the WGFD should develop a partnership program with WyDOT to increase monitoring of roadkilled wildlife on all roads in the project area;

5) Continue to monitor key biological sites and events including but not limited to raptor nesting success and sites, sage grouse leks and population trends, mule deer winter mortality and winter use, occupancy and health of prairie dog colonies;

6) Monitor success of reclamation efforts and initiate remediation work as soon as possible.

7) As explained in the DEIS (@ 2.7.3), the Resource Protection Alternative on All Lands and Minerals would involve voluntary compliance on the part of the 12

P.O. Box 106 • Cheyenne, Wyoming 82003 • Phone 307-637-5433 • Fax 307-637-6629
Wyoming Affiliate of the National Wildlife Federation

operators. BLM should convene a group consisting of area conservation groups, landowners, and operators and facilitate an MOU from the operators agreeing to this alternative. 12

8) State and federal biologists should survey the PAPA for opportunities to initiate appropriate habitat enhancement projects for wildlife species, opportunities that may in fact be lost with industrial development; particular enhancements that involve burning of decadent shrub communities to promote beneficial and varied age classes of shrubs may be impossible in an operating natural gas field. These projects should be implemented prior to industrializing the area identified as appropriate for the burn(s). 13

Sage Grouse

If the listing of sage grouse for protection under the Endangered Species Act appears imminent, or happens, the BLM should re-analyze the impacts of the Pinedale Anticline Natural Gas Project on this species, and delay construction of any further industrial facilities until it is determined by consulting with the USFWS that no adverse impacts would occur. 14

Conclusion

Finally, the overall industrial development of the Pinedale Anticline should be closely monitored to ensure compliance with the final EIS and Record of Decision. If impacts approach exceeding any of the thresholds, the project should be stopped and new environmental impact analysis implemented.

Again, thank you for the opportunity to submit these comments on behalf of our members, and we look forward to participating in any public process concerning this or other significant actions dealing with BLM's management of public resources in the future.

/s/ Lloyd Dorsey, Wyoming Wildlife Federation-Jackson Field Office
POB 12901, Jackson, WY 83002
307-733-1707
e-mail: ljdorsey@aol.com

LETTER 22

Wildlife Management Institute

Len H. Carpenter, Field Representative
4015 Cheney Drive • Fort Collins, Colorado 80526
Phone (970) 223-1099 • Fax (970) 204-9198
E-mail: lenc@verinet.com

ROLLIN D. SPARROWE
President
RICHARD E. McCABE
Vice-President

January 31, 2000

Bill McMahan
Project Coordinator, BLM
280 Highway 191 North
Rock Springs, WY 82901

Dear Mr. McMahan:

I am the Southwest Field Representative for the Wildlife Management Institute. The Institute is a private, nonprofit, scientific and educational organization founded in 1911 and dedicated to the restoration, conservation, and sound management of natural resources, especially wildlife, in North America. The Institute has the following comments on the Pinedale Anticline Natural Gas Exploration and Development Project DEIS.

The Institute has several concerns with the DEIS. Our concerns center around the acknowledged environmental impacts that this project will have on important natural resources in the Pinedale area. To focus our comments we will begin with statements from the DEIS. It is frightening to read in the Executive summary that:

> "On a local level, landscape changes are going to be dramatic. Most of the project area is pristine and has not been adversely affected by man. In areas where development of the gas resources is extensive (IE a high well density), the natural characteristics of the landscape will change to an "industrialized-appearing setting" (Executive Summary p. 2.).
>
> "Extensive development will create challenges for protecting water quality in the New Fork and Green Rivers" (Executive Summary page 3).
>
> "An extensive network of wetlands occurs along the New Fork River-nearly all of which are located on non-Federal lands. It is anticipated that extensive development in the flood plains along the New Fork River could result in short-term loss of wetland functions" (Executive Summary page 3).

"Even a moderate level of development is expected to result in significant impacts to wildlife in the Pinedale Anticline Project Area" (Executive Summary page 3).

"Development on crucial winter ranges would result in a net loss of this habitat for big game. Such a loss would contradict Wyoming Game and Fish Commission policy that recommends no net loss of this type of habitat" (Executive Summary page 4).

"Sage grouse nesting habitat quality would also diminish proportionate to the density of wells in the project area. Impacts to sage grouse are of particular concern because the project area contains one of the largest populations of sage grouse left in this part of Wyoming" (Executive Summary page 4).

Given these expected impacts, we have several comments and questions that should be addressed in the Final EIS and in decision making concerning this project. First, we ask you to recall the joint letter of 1/8/98 from several different organizations to the Wyoming BLM that clearly pointed out that our interpretation of law and federal policy was that BLM has an equal responsibility to protect above ground wildlife resources as it facilitates mineral extraction. We get the distinct impression from this document (pages 1-5), that the BLM feels that the only "government purpose" of this project is to facilitate oil and gas development.

Under FLPMA, BLM is responsible for sustainable multiple use management of all resources on its lands. A missing purpose is proactive management necessary to sustain wildlife such as mule deer, pronghorn, sage grouse, and raptors through out the life of the project. In judging that "no technically or economically feasible level of mitigation" can be applied to reduce impacts to less than significant, BLM seems to conclude that rights conveyed by leasing supercede all other legal requirements. This common theme seriously abdicates overall responsibility for stewardship of all natural resources. The FEIS must address this important point. 1

Mitigation in this document seems to mean modifying activities during exploration and production. We see no commitment of proactive work to systematically enhance winter range for mule deer or habitats for other wildlife. This should be a major part of the BLM commitment to ensure that these resources remain at viable population levels. References to mitigation in the document uses terms like "could," "should," or voluntary. BLM has the responsibility to assure that mitigation practices happen during the life of the project. Why is the mitigation effort for this project so meager? This important question must be addressed in the FEIS. 2 3 4

Monitoring wildlife resources during exploration and development is essential, and is called for under the existing RMP. The failure to do monitoring under the RMP for fiscal and other reasons suggests that BLM is unlikely to do the monitoring called for to mitigate project impacts. What evidence does the public have that necessary monitoring will be done during life of the project? Please address this important issue in the FEIS. 5

We question choice of alternatives for analyses in the DEIS. The analyses only include a Project Wide Exploration/Development Scenario, the Anticline Crest Exploration/Development Scenario, and the No Action Exploration/Development Scenario. Given expected negative impacts on the environment with this project it would seem that an analysis that offered an Environmental Protection Alternative would be desirable. We do not feel that the two mitigation "alternatives" (Standard Stipulations (SS) and Resource Protection (RP) to be considered with each of the three development scenarios provide decision makers with adequate decision space. We would argue that the resource protection approach should come from an alternative of itself and not part of a lower hierarchal analysis. Please address this concern and consider development of a separate environmental protection alternative for the FEIS. 6

We are concerned about impact of this project to valuable wetlands and to water quality in the project area. The DEIS should take a more aggressive approach to these losses and identify strategies for protection and/or mitigation. 7

Another major concern with this project is impact to important seasonal migration corridors for big game animals. The big game populations in this area are truly "world class." It is critical that necessary steps are taken to minimize negative impacts to these populations. Obviously, information obtained from ongoing research projects concerning movement patterns, timing of movements, and importance to population sustainability must be incorporated into decision making for this project. All developments must be designed to minimize negative impacts to these animals and their habitats. The FEIS should clearly present how this research work will be incorporated into final decision making for this project. 8 9

In the DEIS, considerable verbiage is presented on impacts of the project on sage grouse. Most attention is directed toward impacts on sage grouse leks. We recognize that the well being of leks is an important factor in the life cycle of sage grouse but are concerned that not enough attention is being focused on year-around sage grouse habitat. Maintaining breeding areas becomes moot if other important aspects of sage grouse habitat are lost. We request that the FEIS recognize importance of intact, non fragmented, sage brush habitat to the well being of sage grouse year-around, and ask that approaches to protect sage grouse habitat in total be presented. 10

We are also concerned with the statement (page 1-1) that some of the Federal leases were issued in the early 1950s without environmental review and contain few, if any, measures to protect the environment. This raises the question of whether reactivation of these leases since then has complied with all existing environmental laws? The FEIS should address how these leases have been reactivated over the years. 11

The Institute is very much concerned about the continued "industrialization of Wyoming." The rapid loss of "wild lands" left relatively undisturbed by man's activities is troubling. This loss of natural areas is a concern for anyone that enjoys outdoor recreation and unspoiled places. The BLM with its stewardship responsibilities for public lands must recognize importance and value of these lands to the American public in the long term. It is no longer acceptable to only look at

each individual project without analyzing cumulative impacts of all past, present, and planned energy development projects. The verbiage in Chapter 5 on cumulative impacts does not go beyond impacts of this specific project. The true cumulative impacts are those resulting from the myriad of energy development activities that are permitted. The Institute urges the BLM to recognize this fact and evaluate environmental impacts of these projects as a package. The FEIS should acknowledge this problem. 12

The DEIS reveals that the BLM State Director has concurred with the strategy to withhold areas from further leasing along the Wind River Front and Gros Ventre foothills. These areas are characterized by high recreation use, subdivisions, crucial wildlife habitat, high visual sensitivity, and other values. It is pointed out that these areas need further evaluation before a determination can be made as to their suitability to lease. We commend this approach and ask why not extend this moratorium to other public lands with high natural resource values? 13

Finally, the Wildlife Management Institute has worked with state and federal wildlife agencies since the early part of this century to restore game herds and other wildlife. Mule deer, pronghorn, sage grouse and other wildlife have benefitted from that long-term management. This project is acknowledged to likely reduce those populations. It seems that dollars from hunters and anglers will have to once again pay in an attempt to recover these populations once they decline--largely because BLM feels no responsibility to commit to active plans to sustain these resources. If the base habitat is not maintained in some semblance of natural condition, no amount of money and effort will recover these species for our children to enjoy. The FEIS should address this concern. 14

Thanks for the opportunity for comment. Please be sure we receive all documents relative to this project.

Sincerely,

Len H. Carpenter

Len H. Carpenter

cc:

R. Sparrowe, WMI
A. Pierson, BLM

LETTER 23

Greater Yellowstone Coalition

Dubois, Wyo. office — 6360 U.S. Hwy 26 • Dubois, WY 82513 • (307) 455-3169 • Fax (307) 455-3169

Bill McMahan, PAPA Manager
280 Highway 191 North
Rock Springs, WY 82901

Dear Bill, February 1, 2000

Please accept the following comments on behalf of the Greater Yellowstone Coalition (GYC) and the Jackson Hole Conservation Alliance (JHCA). We appreciate the opportunity to comment on this environmental analysis and particularly find the Draft Environmental Impact Statement and accompanying Technical Report helpful in identifying key issues of concern to us.

GYC is a regional conservation group dedicated to the sound health and protection of ecosystems in and around Greater Yellowstone. Many of its nearly 8,000 members regularly use BLM lands in Wyoming for recreation, hunting, hiking, and general esthetic appreciation of this high desert sagebrush steppe.

The Jackson Hole Conservation Alliance is based in Jackson Hole, Wyoming and is the strongest voice for responsible land-use planning and natural resource conservation on private and public lands in Jackson Hole and the southern GYE. The organization is dedicated to responsible land stewardship in Jackson Hole, Wyoming, to ensure that human activities are in harmony with the area's irreplaceable wildlife, scenic and other natural resources. As we enter our third decade of advocacy, our philosophy remains unchanged: that an environment healthy enough to sustain and perpetuate native biological diversity is also an environment healthy for humans. We also believe that native biological components can thrive in an environment alongside a thriving human community if the human community is willing to make reasonable accommodations in its behavior.

While we can appreciate the fact that much of this Pinedale Anticline Project Area (PAPA) is already leased, that does not mean that this important part of the southern Greater Yellowstone ecosystem (GYE) must now become a defacto industrialized area. If mineral development is to proceed in this sensitive area it must proceed with caution. A balance of resource extraction and resource protection must be established to prevent the southern GYE from becoming just another western energy colony. Mineral development can offer economic benefits to the people, but those benefits have historically been short-lived compared to longterm life-style benefits of open spaces, scenic vistas, abundant wildlife and clean air and water that we all enjoy in Wyoming. GYC doubts if Wyoming is willing to sacrifice all this to become the cash cow for the oil and gas industry.

BLM should encourage a pollution credit system established on each project in Wyoming such as the PAPA in order to put a cap on the amount of allowable emissions by each lessee. Other states have used pollution credits to encourage industry to stay within state and federal clean air standards for specific projects and that could work well for Wyoming as well. In some cases, such as at the Naughton Power plant, the operators have sold or exchanged pollution credits in an attempt to remain below the required air quality standards. 1

There must be a balance between all uses that does not include business as usual drill rigs, pumps jacks, roads, treaters, pipelines and the entire infrastructure that goes with industrial development. The balance we see is slow, deliberate, staged development that takes critical wildlife habitat, migration corridors, air and water quality into consideration. In an attempt to accomplish this goal, we suggest that the RPA consider a lower number of wells than 500. We consider a more appropriate balance could be developed in an alternative that would allow for 200-300 wells in the PAPA. 2

Main Office – P.O. Box 1874, Bozeman, MT 59715 • (406) 586-1593 • Fax (406)-586-0851 • E-mail: gyc@desktop.org
Idaho Office – 1740 E. 17th St., Suite F, Idaho Falls, ID 83404 • (208) 522-7927 • Fax (208) 522-1048
Wyoming Office – 1266 Sheridan Ave., Cody, WY 82414 • (307) 527-7706 • Fax (307) 527-5487

In our efforts to develop conservation strategies for free-ranging wildlife in the southern GYE, our goal is to see ecologically responsible land-use and wildlife management, by identifying and protecting the important habitat and migration routes of wildlife from the southern reaches of Yellowstone Park south to the Red Desert and Great Divide Basins. We hope to include BLM, US Forest Service, Wyoming Game and Fish Department to take advantage of private academic studies and Geographic Information Systems (GIS) mapping technology. This could help land and wildlife managers portray historical, current, natural and man-made landscape features, (such as watercourses, vegetation, roads, fences, oil and gas development, subdivisions and towns) as well as the critical habitat issues (grazing, predation, birthing, travel, and winter ranges) of wildlife and their key travel corridors in that landscape. 3

Conservationists are concerned about the numerous impediments to historical wildlife movements that have been constructed during the past century. These include, but are not limited to roads, railways, urban and suburban development, and fences as well as oil and gas development. To compound these impacts even more the near extirpation of carnivores and buffalo, and the introduction of animal diseases such as brucellosis has had a very detrimental effect. With some exceptions, many large terrestrial wildlife species no longer move across the western Wyoming landscapes in accordance with historical patterns due to habitat fragmentation by roads, fences, oil and gas and other development. Therefore, if pronghorn antelope, moose, elk, mule deer, bison, and large carnivores are to be able to travel across large tracts of land in response to seasonal and resource influences, a large-scale conservation strategy is needed. The PAPA EIS must be an integral part of this strategy.

According to Hall Sawyer's, University of Wyoming Coop Extension research the latest radio telemetry studies show that all 28 radio-collared pronghorn were located on 1-14-2000. No collared animals remained in the Jackson Hole Valley or the Gros Ventre River Drainage. Similar to 1999 winter, 90% (n=25) of the pronghorn were found within the Pinedale Anticline Oil & Gas Project Area, along the New Fork River. Two were found in the Jonah Field, south of Stud Horse Butte. Another was located two miles west of Farson, approximately 140 miles from where the pronghorn summered. This study is an excellent example of why development this area should be minimized and balanced with existing wildlife migration and winter use. If crucial winter range on the PAPA is roaded, drilled and otherwise developed, we can anticipate a serious decline in pronghorn herd numbers.

Specific recommendations for the PAPA DEIS:

1. Since such large scale defacto leasing has lead us to this point of irretrievable commitment of resources to mineral development, we request that the BLM discontinue all new leasing and lapse expiring leases in the Green River Basin until the impacts of such widespread industrialization can be evaluated; 4

2. limit well density on existing leases to no more than one well site per square mile; 5

3. require pad drilling and centralized production facilities to minimize the cumulative effects of such large scale industrialization; 6

4. limit development and travel in the project area during critical wintering periods for deer and pronghorn antelope. During the spring season require stipulations to protect breeding and nesting areas of sage grouse and birds of prey. Require that operators fund wildlife, water and air quality monitoring studies for the duration of the project; 7

5. prevent such large-scale wildlife, migratory song bird and raptor losses in waste pits by requiring closed waste systems; 8

6. establish an interagency monitoring team (with broad and balanced stakeholder participation) to track industry compliance with BLM's standards and to reduce environmental effects; 9

7. expand the Wind River Range lakes and IMPROVE monitoring studies to additional sites in order to cover all areas of the Class I airshed; 10

8. encourage a limit of pollution credits on each BLM project such as the PAPA in order to put a cap on the amount of allowable emissions by each lessee. Other states have used pollution credits systems that encouraged industry to stay within state and federal clean air standards for specific projects and that could work well for Wyoming as well. In some cases, the operators have even sold or exchanged pollution credits to each other in order to remain below the required standards; 11

9. require "development corridors" which would reduce the impacts of roads, pipelines and powerlines. Require that powerlines be buried to eliminate avian electrocution and destruction of scenic views; 12

10. request that industry operators implement the same resource protections on the leased private land as they are required to do on public lands; 13

11. require that reclamation of disturbed lands be accomplished with native species, particularly adequate sagebrush, native grasses and forbs; 14

12. prohibit transportation across crucial winter range on the PAPA and require employee carpooling to reduce traffic congestion to Tyler Street access in Pinedale; 15

13. limit number of wells being developed at one time to a lower number such as 250; 16

14. livestock grazing allotments should be monitored, evaluated and strictly regulated to provide adequate wildlife habitat and forage;. 17

In conclusion, we find the maximization of mineral lease development to be mutually exclusive of resource protection. There will inevitably be very significant impacts to the resources that cannot be avoided even under the RPA development scenario. We must all be creative about how to allow limited development to proceed without impacting surface resources. For example, we should have centralized facilities with remote sensing automated production to reduce the transportation concentration and development footprint on the land.

We look forward to working with you on this important issue.

Respectfully submitted,

Meredith Taylor
Wyoming Field Representative
Greater Yellowstone Coalition
6360 Hwy 26
Dubois, WY 82513
307-455-2161

Pamela Lichtman
Program Director
Jackson Hole Conservation Alliance
PO Box 2728
Jackson, WY 83001
307-733-9417

LETTER 24

PETROLEUM ASSOCIATION OF WYOMING

951 Werner Court, Suite 100
Casper, Wyoming 82601
(307) 234-5333

fax (307) 266-2189
e-mail: paw@pawyo.org

February 4, 2000

Bureau of Land Management
Bill McMahan, Project Manager
280 Highway 191 North
Rock Springs, WY 82901

Re: Comments DEIS Pinedale Anticline Natural Gas Exploration and Development Project.

Dear Mr. McMahan:

The Petroleum Association of Wyoming would like to thank the BLM for this opportunity to comment on the referenced document. PAW is Wyoming's largest and oldest oil and gas trade organization, the members of which account for over ninety percent of the natural gas and over seventy percent of the crude oil produced in the state. The Pinedale Anticline Natural Gas Exploration and Development DEIS and subsequent FEIS and ROD will directly affect a number of PAW members.

Overall, PAW is alarmed at the severity of restrictions on the number of drilling/production pad locations and drilling rigs allowed to operate at any one time being contemplated in this document. These restrictions, if selected, will result in diminished opportunity to timely and fully develop federal oil and gas resources and may possibly result in takings. Federal lands in the Pinedale Anticline Project Area (PAPA) have long been identified in land planning documents as being available for oil and gas leasing. Changes in landscape and land use in the PAPA were contemplated when BLM approved its RMP for the area. Therefore, it is not inappropriate for BLM to allow for sufficient pad locations and drilling rigs to fully develop the resource while relying heavily on standard mitigation measures. 1

PAW believes the second alternative, entitled, "Resource Protection Alternative", is misleading in that it suggests that "Standard Stipulation Alternative" does not provide ample resource protection. On page 1-4, BLM states "the alternative (standard stipulations) incorporates a **myriad of measures** which have **proven to be very effective** in reducing environmental impacts from oil and gas development" (emphasis added). The oil and gas industry appreciates BLM's recognition of the effectiveness of standard stipulations and we believe that they are generally sufficient for BLM to meet its land stewardship responsibilities throughout the state, including the PAPA. 2

On page 1-4, the "Resource Protection Alternative" is described as recommending "additional mitigation measures which are specifically designed to further **reduce impacts beyond current regulatory requirements** . . ." (emphasis added). PAW is very disturbed that BLM is contemplating exceeding regulatory requirements and has a number of questions regarding this issue. 3

Where does BLM find its authority to exceed regulatory requirements? If BLM has such authority, what justifications must be present in order for BLM to exceed a regulatory requirement? Exceeding a regulatory requirement is in essence creating a new requirement,

therefore, should not the new requirement be subject to the rule making process? Answers to these questions must be disclosed in the FEIS. 3

In the Executive Summary it is stated, ". . . in some areas, development will lead to significant adverse impacts. No technically feasible level of mitigation can be applied in these areas to minimize the severity of impacts to less than significant." PAW understands that this statement is based on the results of modeling for mule deer and sage grouse that has not been used previously in the area and that the assumptions and model protocol have not been peer-reviewed nor have the model results been tested against actual monitored results. The modeling also assumes permanent loss or decrease in reproduction to the species from any displacement rather than recovery after the drilling phase. PAW requests BLM disclose in the FEIS that the modeling has not been peer or stakeholder reviewed and list assumptions that BLM employed to make this statement. 4

Under the "Resource Protection Alternative", a limit of 5 rigs would be allowed to operate in the PAPA at any one time only 2 of which would be allowed to operate north of the New Fork River. This limit appears to be a whimsical and subjective decision. Aside from questioning the validity of data and methodology employed at establishing this limit, PAW is unsure how such a limit can be successfully and legally imposed. Who will decide who gets to drill? How will BLM protect itself from drainage in a timely manner if all 5 rigs are committed to other properties? Can BLM prohibit an operator from fulfilling a drilling commitment to preserve its leasehold rights? Operators facing the prospect of protecting drainage on federal land from wells on adjacent federal lands could be restricted in their attempts to protect their correlative rights. 5

BLM cites in the DEIS an IBLA decision which indicates that staggering development over time to be an "obvious alternative", however, BLM does not have the legal mechanisms by which it could allocate leaseholder's access to drilling rigs to accomplish that goal. Without taking into consideration, at a minimum, the conservation of oil and gas resources, property rights (takings), correlative rights and leasing activity, staggering development solely by limiting the number of available drilling rigs constitutes ineffective mineral resource management. Nevertheless, PAW believes that staggered development is not warranted given that other restrictions for wildlife protection preclude drilling for all but 4 1/2 months out of a year. In other words, BLM has already significantly affected the manner and pace of development. 6

BLM also need to address its limitations on compression. Clarification is needed in the FEIS if a compression limit of 26,000 hp will be used as the level of concern where additional air quality analysis will occur or will the total level of nitrogen oxide emissions analyzed in the DEIS be used? 7

The FEIS should also contain a more thorough discussion the impacts of drilling from only 4 well pad locations per section in sensitive areas. For instance, page 2-47, Tables 2-11 and 2-12 show the disturbance of 700 wells and 500 wells under the Resource Protection Alternative respectively. The total PAPA area is 197,345 acres. The short- and long-term disturbance for the 700 well level of development is 7,437 acres and 1,340 acres, which is 3.74% and 0.68% of the total PAPA, respectively. The short- and long-term disturbance for the 500 well level of development is 6,265 acres and 988 acres, which is 3.2% and 0.5% of the total PAPA, respectively. Compare the following disturbance for the Standard Stipulation Alternative (SSA) and the Resource Protection Alternative (RPA): 8

	500ST Acres	% Of Total	500LT Acres	% Of Total	700ST Acres	% Of Total	700LT Acres	% Of Total
SSA	7,363	3.7	1,382	0.7	9,064	4.9	1,914	0.97
RPA	6,265	3.2	998	0.5	7,437	3.7	1,340	0.68
Diff.	1,098	0.5	384	0.2	1,627	1.2	574	0.29

(ST = short-term, LT = long-term)

The conclusion is that by restricting the number of rigs, and allowing only 4 pads per section in the sensitive resource management zones, the net gain is one percent or less disturbance in all scenarios. This gain of disturbed acres up to 1.2% for short-term disturbance is offset by the $7.2 million to $9.6 million additional cost spent per section by the operators at $600,000 to $800,000 per directional well. It is recommended that a cost-benefit analysis be performed to justify the additional cost of the Resource Protection Alternative. 8

Directional drilling presents numerous technical problems for operators. A discussion of potential impacts and costs associated with risks from well bore damage and completion difficulties must be included in the DEIS. Additionally, PAW is concerned that requirements for directional drilling may limit operator's ability to recover oil and gas resources so severely as to become a taking. 9

PAW believes that the nature and scope of a "Resource Protection Alternative" as described is not justified and recommends that BLM pursue, as the preferred alternative, the "Standard Stipulation Alternative" with as few modifications as necessary.

Sincerely,

Thomas H. Clayson
Vice President

cc: D. True
Parsons
Steinle
Icenogle

5-107

LETTER 25

The Mule Deer Foundation

Making a difference in mule and blacktail deer conservation through management, education, information and member involvement.

February 4, 2000

Mr. Bill McMahan
Project Coordinator, BLM
280 Highway 191 North
Rock Springs, WY 82901

By Fax and Mail

Dear Mr. McMahan,

The Mule Deer Foundation would like to register its comments on the Pinedale Anticline Natural Gas Exploration and Development Project Draft Environmental Statement (DEIS).

The Mule Deer Foundation (MDF) is a non-profit conservation organization whose Mission is to conserve mule deer and their habitats. MDF has members and chapters in nine western states including Wyoming and we have concerns about what appears to be an attitude of fatalism towards the effects upon wildlife within the Pinedale Anticline, in particular towards mule deer. While our comments are centered on mule deer, MDF does not ignore the fact that it is the ecosystem that will suffer from lack of mitigatin and proactive management, and that mule deer are but one of the ecological indicators of the degradation which will be caused by this proposed development.

Our concerns for mule deer revolve around two inferences.

The first is a general approach taken by BLM that because oil and gas will provide a higher economic use of the area. "*. . . non-resident antelope and deer hunters in all of southwest Wyoming generate about $9 million in total economic activity annually. This is equal to the same total economic activity that would be generated by less than eight typical wells . . .*" Petroleum development does bring in significant sums of money, but that must be balanced with the impacts upon the natural systems. Under the Federal Lands Policy Management Act, the Bureau of Land Management is responsible for the sustained multiple use management of all resources, not just mineral resources, on its lands. This includes natural resources. While economic benefit is certainly a legitimate

measure of benefits, destruction of habitat quality must be evaluated, not only for this generation, but also for future generations. 1

The second and the more serious deficiency in the DEIS, is the attitude that the impacts of the development are inevitable. It implies while mitigation might modify activities during exploration and development, there is no ongoing commitment to enhance winter range for mule deer. The lack of detailed emphasis on mitigation for the project is a limitation that must be corrected in the final EIS. MDF is puzzled as to why, given the technology of drilling and the ability to remotely monitor as well as limit activity around wells, there is no clear requirement for the developing entities to limit those impacts. Instead, the references to mitigation are vague. This is a most serious project, given the impact upon the recent excellent work done on the Sublette Mule Deer Herd by Ultra Petroleum, MDF and others. The effect of this project, if not proactively and adaptively managed, will be significant and possibly devastating. For instance, while (only?) "... *27,220 acres in the PAPA coincide with crucial winter range for mule deer in the Sublette HU*" (figure 3-20 Mule Deer Season Ranges in the Project Area) demonstrates the adverse impact upon winter range and implies even greater damage to traditional migratory routes. This would affect an even greater area and population than just that crucial winter range. Yet, the implication is the impacts are inevitable and that ignores a proactive approach and/or mitigation to enhance winter range for mule deer. The monitoring and proactive approaches should be clearly incorporated into the final EIS. 2 3 4

Lastly, this development seems to contradict Wyoming Game and Fish Commission policy that calls for "no net loss" of this type of habitat. "*Development on crucial winter ranges would result in a net loss of this habitat for big game.*" DEIS. If this project progresses under the approach of the DEIS, sportsmen, who have put forth funds to salvage mule deer and other wildlife populations and their habitats, will again be asked to pay to recover the wildlife habitat impacted. However, there is a limit beyond which destruction of wildlife populations and habitat cannot recover. The final EIS should address these concepts and their economic impact. 5

Thank you for the opportunity to comment on the Pinedale Anticline Natural Gas Exploration and Development Project Draft EIS. We anticipate continued correspondence and communication on this most important issue.

Sincerely,

William I. Morrill, Ph.D.
President/CEO

LETTER 26

WYOMING CHAPTER OF THE SIERRA CLUB
P. O. Box 263
Jackson, WY 83001

Subject:
Pinedale Anticline DEIS comments

Date: February 4, 2000

FROM:
Page McNeill
Chapter Chairperson
Sierra Club, Wyoming Chapter
P. O. Box 263
Jackson, WY 83001

TO:

Bill McMahan, Project Manager
280 Highway 191 North
Rock Springs, WY 82901
bill_mcmahan@blm.gov

Tom Fry, BLM Director
Pinedale Anticline DEIS
1849 C Street NW LSB-204
Washington, DC 20240
Tom_A_Fry@IOSDOI.gov

Dear Mr. McMahan and Mr. Fry,

Please accept the following comments on behalf of the Wyoming Chapter of the Sierra Club. We appreciate the opportunity to comment on this analysis.

The Sierra Club is one of America's oldest conservation organizations, with over half a million members in the United States alone. Many of our members, both in and outside of Wyoming, regularly use BLM lands in Wyoming for recreation, hunting, hiking, and general aesthetic appreciation of this important and beautiful high desert habitat. The Sierra Club is also very concerned about how activities proposed in the PAPA will affect other resource areas, which they also utilize and enjoy, such as the Wind River Mountains, including Bridger-Teton National Forest and Shoshone National Forest.

Preliminarily, the Wyoming Chapter of the Sierra Club would like to point out some procedural errors in this whole process. The BLM has stated (in the DEIS -- see p. 1-13) that this 1

PAPA DEIS is also to be considered as an amendment to the Resource Management Plan (RMP). But the BLM is not following its own rules for amendments to Resource Management Plans.

First of all, both the Notice of Intent to prepare the EIS and the Notice of Availability of the EIS (published in the Federal Register) should have informed the public of the proposed amendment to the RMP. Neither notice did this. Secondly, because an EIS is being prepared, the BLM must follow the general planning regulations, which includes a 90-day public review period. 43 CFR 1610.2(8)(e) provides as follows:

"(e) At least 15 days' public notice shall be given for public participation activities where the public is invited to attend. Any notice requesting written comments shall provide for at least 30 calendar days for response. Ninety days shall be provided for review of the draft plan and draft environmental impact statement. The 90-day period shall begin when the Environmental Protection Agency publishes a notice of the filing of the draft environmental impact statement in the FEDERAL REGISTER."

1

It is our understanding that a 90 day comment period in this case would not expire until Feb. 24, 2000. This means that the BLM should do one of two things. One option is that BLM should conform the final decision resulting from the EIS (the Record of Decision) to the current requirements of the RMP (in other words, do not amend the RMP). Given the PAPA proposal, only the no action alternative would work, if this option is used. Secondly, if the BLM wants to amend the RMP, then it must start all over and notify the public properly of its intent to amend the RMP, and provide for the appropriate comment periods for commenting on the EIS. In short, an EIS which has as part of its proposal a plan to amend the RMP must follow all of the rules applicable for any amendment of a Resource Management Plan.

While we can appreciate the fact that much of this Pinedale Anticline Project Area (PAPA) is already leased, that does not mean that this important part of the southern Greater Yellowstone ecosystem (GYE) must now become a defacto industrialized area. If mineral development is to proceed in this sensitive area it must proceed with caution. A balance of resource extraction and resource protection must be established to prevent the southern GYE from becoming just another wasteland of pump jacks, criss-crossed by innumerable roads. Mineral development is proper in these lands, but it is worthwhile to remember that the benefits have historically been short-lived compared to long term life-style benefits of open spaces, scenic vistas, abundant wildlife and clean air and water that we all enjoy in Wyoming.

There must be a balance between the multitude of uses that are permitted on BLM lands. This means that the industrialized scenario contemplated by your DEIS that includes a plethora of drill rigs, pumps jacks, roads, treaters, pipelines and the entire infrastructure that goes with industrial development must be balanced against other uses of the PAPA BLM lands. Much more desirable is a process of slow, deliberate, staged development that takes critical wildlife habitat, migration corridors, air and water quality into consideration. In our efforts to develop conservation strategies for free-ranging wildlife in the Green River Basin, our goal is to see ecologically responsible land-use and wildlife management, by identifying and protecting the important habitat and migration routes of wildlife from Yellowstone National Park south to the Red Desert and Great Divide Basins, and the Colorado Rockies.

Before any action is taken, you should combine with the US Forest Service, Wyoming Game and Fish Department, private academic studies and the Geographic Information Systems (GIS) to develop mapping technology to portray historical, current, and anticipated natural and man-made landscape features, (such as watercourses, vegetation, roads, fences, oil and gas development, subdivisions and towns) as well as the critical habitat areas (grazing, predation, birthing, travel, and winter ranges) for wildlife and their key travel corridors in that landscape.

2

There is a paucity of information with respect to air quality. The modeling of air quality is marginal at best, due to our incomplete understanding of the air pollution and atmospheric processes, the unknown variables related to the input and types of pollutants, and the characterization of the local and upstream conditions. Based upon what we do know and are likely to encounter, there will be significant effects due to particle/chemical emissions. The "significant criteria" standards have been set too large. There will be reduced visibility due to emitted and grown particles and photochemical reactions. Humans and wildlife will ingest the released chemicals and particles. While the modeling indicated minimal effects under the assumed conditions, we recommend inclusion of the model limitations, and input parameters for the "accidental" excursions of particulate and chemical matter into the project area. While the model shows plumes "highly visible for hundreds of feet," this is probably not realistic. Flare blowouts, hydrocarbon burns, and drilling exhausts are visible for thousands of feet, if not miles. The low level inversions frequently found in the Green River Basin area, coupled with high energy sunlight, cold temperatures and moisture produce effects that have not been adequately modeled.

3

We are concerned about the numerous impediments to historical wildlife movements that have been constructed during the past century. These include, but are not limited to roads, railways, urban and suburban development, and fences as well as oil and gas development. To compound these impacts even more the near extirpation of carnivores and buffalo, and the introduction of animal diseases such as brucellosis has had a very detrimental effect. With some exceptions, many large terrestrial wildlife species no longer move across the western Wyoming landscapes in accordance with historical patterns due to habitat fragmentation by roads, fences, oil and gas and other development. Therefore, if pronghorn antelope, moose, elk, mule deer, bison, and large carnivores are to be able to travel across large tracts of land in response to seasonal and resource influences, a large-scale conservation strategy is needed. The final PAPA EIS must recognize this and be an integral part of this strategy.

In the "Draft Environmental Impact Statement on the Pinedale Anticline Oil and Gas Exploration and Development Project," (DEIS) the BLM admits that the project will have significant impacts on water and air quality and wildlife populations. Historically, pronghorn, elk, bison, and deer migrated through the Pinedale area between summer ranges in Greater Yellowstone ecosystem and winter ranges in the Green River Basin. The pronghorn migration through western Wyoming is the longest of any ungulate in North America except the caribou in Alaska. Once a stronghold for sage grouse populations in the West, the Green River Valley has experienced severe decline of its upland bird population.

We heartily approve of the "Mitigation Opportunities" set forth on pp. 4-165 to 4-168, and would encourage their adoption as part of the final decision in this matter. We do not understand, however, why the BLM states that some of the opportunities could not be required by the BLM. For instance, why could the BLM not require its permittees to adequately muffle all motorized equipment (Mitigation Opportunity No. 2)? Or not be able to require that all employees of the operators and their contractors be housed off-site and off public lands (Mitigation Opportunity No.3)? We urge the BLM to require compliance by their permittees with all Mitigation Opportunities identified in the DEIS. 4

According to Hall Sawyer's latest radio telemetry studies, all 28 radio-collared pronghorn were located on 1-14-00. No collared animals remained in the Jackson Hole Valley or the Gros Ventre River Drainage. Similar to last winter, 90% (n=25) of the pronghorn were found within the Pinedale Anticline Oil & Gas Project Area, along the New Fork River. Two were found in the Jonah Field, south of Stud Horse Butte. Another was located two miles west of Farson, approximately 140 miles from where she summered.

Specifically, we recommendation that you adopt an alternative for the PAPA EIS that would include the following elements:

1. STOP FURTHER LEASING. Since such large-scale unbridled leasing has lead us to this point of irretrievable commitment of resources to mineral development, the Wyoming Chapter of the Sierra Club requests that the BLM discontinue all new leasing and lapse expiring leases in the Green River Basin until the impacts of such widespread industrialization can be evaluated. 5

2. LIMIT WELL DENSITY. There should be no more than one well pad allowed per square mile. Given the fact that little is known about the gas field underlying the PAPA, how productive it will be, where the gas will be found, etc., this limitation is extremely reasonable, and will probably benefit industry as much as the public, since it will force industry to select the best prospects for drilling first. Then, once more is known about the gas in the PAPA, consideration to additional wells can be given at a later time. 6

3. LIMIT THE TOTAL NUMBER OF WELLS. The DEIS considers only two development alternatives: 500 wells or 700 wells. This does not make much sense. When some experts, according to the DEIS think that only 300 wells are needed to explore the PAPA, this suggests an obvious third alternative of 300 wells. Furthermore, 300 wells may in fact be too many. Again, given what we know and do not know about the PAPA and the gas that underlies it, a 100 well alternative is the most reasonable, since it would allow for some limited development now, and if there proved to be a need for more wells, after the field has become more well defined, another EIS could be done to take a second look at further development. If marginal wells are not developed at present, that hydrocarbon resource will be available for future exploitation, when more cost effective methods for development, and mitigation, will be available. 7

4. REQUIRE SLANT DRILLING. Horizontal drilling should be utilized, despite the objections of industry, since centralized pad drilling and centralized production facilities will help to minimize the cumulative effects the large scale industrialization contemplated by this project. 8

5. REQUIRE AND ENFORCE SEASONAL SUSPENSIONS OF OPERATIONS. Development operations and travel should be suspended in the project area during critical wintering periods for deer and pronghorn antelope. During the spring season require stipulations to protect breeding and nesting areas of sage grouse and birds of prey. Require that operators fund wildlife, water and air quality monitoring studies for the duration of the project. 9

6. COVER ALL WASTE PITS. In order to prevent large-scale wildlife, migratory song bird and raptor losses, wastepits should either be eliminated and replaced with closed waste systems, or all waste pits should be covered at all times. 10

7. ENFORCE YOUR RULES. An interagency monitoring team should be established to track industry compliance with BLM, Wyoming DEQ and EPA standards and to head off environmental violations, or reduce the environmental effects of those violations. 11

8. STRICTLY ENFORCE AIR AND WATER QUALITY STANDARDS. Require that operators use electric compression to minimize impacts to air quality. Do not allow pollution limits to be exceeded on even a temporary basis. Enforce state and federal air and water quality standards to reduce emissions and fugitive dust. The Green River is a Class 1 water, above the confluence with the New Fork River, and it should be remembered that under state regulatory requirements, no new discharges are allowed to Class 1 waters. Care should be taken, furthermore, to prevent indirect discharges to the Green River, by requiring that there be no pollution discharges to tributaries of the Green River, and no waste pits should be allowed within the flood plain of the Green river. 12

9. REQUIRE GOOD STEWARDSHIP ON PRIVATE LAND. While we understand that the BLM has very limited authority on private land, to the extent that communitization and pooling requirements require that operators coordinate their drilling between federal leaseholds and private leaseholds, and thus impact upon BLM's jurisdiction, we urge the BLM to require that all industry operators implement the same resource protections on the leased private land as they are required to do on public land. 13

10. EXPAND MONITORING OUTSIDE THE PAPA. Monitoring of the Wind River Range lakes needs to be expanded, given the anticipated impacts for increased air pollution, and the existing monitoring studies need to be improved, with additional sites, in order to cover all areas of the Class I airsheds of the Bridger-Teton and Shoshone National Forests. The Wind River Lakes' studies conducted by the US Forest Service have already demonstrated an increase of NOX in Class I waters of the wilderness areas and reduced visibility of mountain vistas. The cumulative effects of so the PAPA development, along with the many other development projects underway or contemplated in southwest Wyoming, will inevitably have long-term effects on this sensitive high desert ecosystem. 14

11. LIMIT ROAD CONSTRUCTION A planned system of development corridors should be used to reduce the impacts of roads, pipelines and power lines. Power lines should be buried to eliminate avian electrocution and decimation of scenic views. According to studies conducted in the area, roads, well sites and human presence displace antelope, deer, moose and sage grouse from their native range. 15

12. RECLAIM USING NATIVE PLANTS. It is important to require that reclamation of disturbed lands be accomplished with native species, particularly adequate sagebrush, native grasses and forbs. You cannot really consider the land to be reclaimed if you allow non-native species to be used for replanting and reclamation purposes. True restoration to former conditions must entail, in no uncertain terms, a restoration to pre-drilling conditions, which must include the use of native species for that task. 16

13. STAY AWAY FROM SAGE GROUSE LEKS. The most recent studies on sage grouse continue to indicate, unequivocally, that sage grouse are very sensitive to any disturbance within two miles of sage grouse leks, during their mating season. Because of the unprecedented decline of the sage grouse in Wyoming and throughout the west, we recommend that no oil and gas development be allowed within two miles of a known sage grouse lek anywhere within the PAPA. Declines of this bird will undoubtedly occur, but vigorous mitigation measures should be attempted now, before the sage grouse becomes listed as an endangered species. 17

14. LIMIT TRAFFIC. Transportation across crucial winter range on the PAPA should be severely limited, and employee car pooling should be mandatory to reduce traffic congestion in and out of Pinedale, via Tyler Street. 18

15. CONTROL SOUND AND ARTIFICIAL LIGHT. Currently, oil and gas development already taking place close to Pinedale has shown significant effects. Even at a mile from a drilling/ completion operations, the noise level of drilling pad operations prevents sleep and overshadows the background sounds of wildlife and river. Hundreds of wells putting out this kind of noise throughout the PAPA cannot be tolerated, by humans at least. Similarly, light coming from unrestricted point sources at night, and back scattered light from aerosols and hillsides contribute to incredible light pollution. All lighting sources, both temporary and permanent, should be shielded and directed to the specific work area. 19

16. PROTECT GROUNDWATER RESOURCES. While this should go without saying, it is interesting to note that some domestic wells in the PAPA have already been affected just since drilling has started in the PAPA (during the completion of nearby gas wells), even though these wells had not had any previous water quality problems. Therefore, a monitoring program for groundwater should be established, and include all domestic wells within the project area. This should be done by a federal or state agency, at the expense of the operators, but the groundwater should not be tested by the operators of the project, or their contractors. It may quickly become apparent that the groundwater resource is quite sensitive to disturbance, requiring many more precautions to be taken than simply effective well casing for drilling operations. 20

17. DON'T TRY TO MAXIMIZE PRODUCTION. The mandate of the BLM is to manage the resource for all users, despite the rather confusing wording of the CFR sections quoted in the DEIS. Maximization of mineral lease development would result in intolerable destruction of the surface resource for many other uses, not the least of which is ranching, grazing, wildlife habitat, hunting, and recreation. Maximization is mutually exclusive of resource protection for these other uses. There will, perhaps inevitably, be very significant impacts to the resources that cannot be avoided. But 21

while limited development may be appropriate, but it must proceed without impacting surface resources. 21

18. SLOW DOWN. A slower pace of development is needed for other reasons. By approving a development project at such a large scale, the BLM is perpetuating Wyoming's history of boom and bust economies that ultimately threaten the stability of local communities. 22

According to the DEIS, "No technically or economically feasible level of mitigation can be applied in these areas to minimize the severity of impacts to less than significant. The only way to eliminate these impacts would be to take the lease rights granted to the lessee...." The Wyoming Chapter of the Sierra Club rejects this approach. It is as if the BLM is throwing up its hands and saying "There's nothing we can do." But that is not right. Without eliminating the right to extract the resource, the BLM can do plenty (as outlined above) to control and restrict the impacts on the surface (and groundwater) resources. The BLM'S Resource Protection Alternative (RPA) does start to address conservation concerns by reducing roads and traffic, excessive use of groundwater and displacement of wildlife, but it must be improved to prevent devastating long-term effects of this potentially huge project on our natural resources. But it needs to be improved upon. Full-scale oil and gas industrialization of the Green River Basin is not the only option. Concerns for additional protection of our communities, wildlife, air and water can and should be addressed. 23

Finally, the comments of one of the speakers at the hearing in Pinedale on the DEIS on Jan. 12, 2000, Ms. Linda Baker, are worthy of note. We concur with these comments and provide them, with her permission, again to the BLM for careful consideration:

"This DEIS has made it very clear, that the Pinedale Anticline Project will go forward. And just as surely, our legacy, healthy populations of native wildlife will falter. The vast herds of pronghorn and mule deer, the wintering thousands of sage grouse will not be seen again in our life times.

Perhaps, with the proper stewardship that we all hope someone in the future will assume, that we ourselves lack the courage to enforce, our herds and flocks will rebound. And perhaps the world will become even more crowded, the Green River Valley will continue down its present road, and become something entirely different.

There is every reason why we should proceed on this huge landscape alteration with the utmost caution. The valuable gas underlying this valley has been there a long time and will remain. It's value is in its longevity as well as its abundance. There are too many valuable resources at stake, each one of which is as important as any other to our country's citizens, and each one of which the BLM has a mandate to preserve.

Neither do we know just exactly what effect the unbridled rush to develop will have on ultimate numbers of pronghorn, mule deer and sage grouse, ravens, meadowlarks and jackrabbits, pintails, horned toads and great gray

owls. This project will be studied closely, however, as a pilot project. But corrections to mistakes may be too little too late. By the time we realize the extent of destruction, we will have lost our chance to regain biological ground for a very long time.

It is a mistake to consider this document as an update to the Pinedale Resource Management Plan, covering not just this project, but the entire 931,000 acres, with decisions that will be with us for such a time. A mistake for this office of the Bureau of Land Management to depart from the mission of the BLM: "to sustain the health, diversity and productivity of the public lands for the use and enjoyment of present and future generations." Because when the BLM says "additional exploratory and development drilling...could cause significant adverse impacts to the human and natural environments," and "landscape changes are going to be dramatic," and "even a moderate level of development is expected to result in significant impacts to wildlife," that would be considered an unhealthy loss of productivity. I consider that a sickness. This must not be a prescription for the entire Pinedale area. The RMP update must be considered as another document. 24

The basic reason for contemplating totals of either 500 or 700 wells is because "the BLM must... require 'that all operations be conducted in a manner which protects other natural resources and the environmental quality... and results in the maximum ultimate recovery of oil and gas.' BLM interprets these seemingly inconsistent directions to mean that the agency must provide effective mitigation to prevent unnecessary and undue degradation, but cannot unreasonably infringe on the lessee's existing rights. Further, BLM considers the economic removal of all of the leased resources in the leasehold a right conveyed to the lessee."
But conflicting with this interpretation is the BLM statement that "no... level of mitigation can be applied in [some] areas to minimize the severity of impacts to less than significant."

So, if the program that allows "maximum recovery of oil and gas" fails to protect natural resources and environmental quality, then BLM has not provided effective mitigation.

"No level" of mitigation is not an alternative here. The alternatives that are currently being analyzed are insufficient to adequately protect the considerable resources at stake. Some operators believe 300-350 wells would be a realistic goal. I request that BLM assess the impacts of 300-350 wells as an additional alternative, as FLPMA gives authority to do. BLM must also consider 2 wells per section as another possibility, or it fails to protect the rights and property of the people. 25 26

BLM states that "limiting the number of well pads to less than 4 per section... may result in a taking of the lease rights granted to the operators." If more than 4 wells per section are drilled, would the acknowledged impacts result in the taking of the value of the wildlife from the people of Wyoming? Will they be compensated for this taking? Will they be compensated for the lost opportunities to hunt deer, antelope and other game animals? Will they be compensated for the lost opportunity to enjoy the benefits of the WG&F "Watchable Wildlife" program, on which Wyoming taxes were spent? 26

The Pinedale RMP states that "wildlife habitat management will be oriented toward the maintenance of fish and wildlife habitats.... Activity planning will emphasize habitat enhancement and protection." Operators were well aware of these covenants promised to public land and wildlife owners in a publicly reviewed and approved legal document when they took these leases. 27

Where does it say in any Federal document that the needs of the operators are more important than the needs of the other resources? Where does it say that a balance of resource requirements cannot be attempted? Why will it "not be possible to achieve both of these goals"?

"BLM can only impose reasonable mitigation measures upon a lessee." How does one define "reasonable"? What percentage of the BLM's and the operators total budget should be devoted to conservation measures to protect what they are legally bound to protect?

I would like to see a new section added to the FEIS that takes into account whether the recent 3-D seismic exploration was helpful, and whether it would further protect and add understanding of the resource to conduct further 3-D testing. Careful study is essential."

The Wyoming Chapter of the Sierra Club would like to thank the BLM for this opportunity to comment on the Pinedale Anticline DEIS. We hope that you will carefully consider our comments and proceed carefully and slowly with any development, taking into account the needs of other resource values, since it is those other resource values and resource needs that will remain long after most of the oil and gas has been removed from the Green River Basin. 28

Sincerely,

Page McNeill

Page McNeill
Chapter Chairperson
Wyoming Chapter, Sierra Club

LETTER 27

January 31, 2000

Upper Green River Cattle Association
c/o Charles C. Price
PO Box 375
Daniel, WY 83115

USDI BLM
Pinedale Resource Area
PO Box 768
Pinedale, WY 82941

Dear Sirs:

The Upper Green River Cattle Association (UGRCA) would like to provide the following Comments on the Draft Environmental Impact Statement for the Pinedale Anticline Oil and Gas Exploration and Development Project. The UGRCA is a group of 13 ranches that graze cattle on BLM grazing allotments, which encompass part of the Pinedale Anticline Project Area (PAPA). A large-scale gas development could impact the way we graze our cattle and could impair our ability to trail our cattle to their summer range in the Upper Green. Our largest concerns are water, cattle trailing, and impacts caused by the project's transportation system.

Water has always been the lifeblood of the livestock industry on arid BLM allotments. We utilize stock ponds and a very limited number of water wells. These wells are absolutely essential for proper utilization of the allotments. Members of the UGRCA have expressed a concern over the possibility of decreased well flows and commingling of aquifers from the water use this project may cause in its operation. The UGRCA has previously Worked with the BLM and the gas operators on language in an MOU which requires isolation of the upper aquifers when drilling to the deep, high-producing lower aquifer. Nearly all of the livestock watering wells are in the upper aquifers and loss of those aquifers and wells would be very expensive to the grazing permittees. The MOU that the livestock permittees thought was agreed upon would have isolated the upper aquifers and would have established a monitoring protocol for water quality in those livestock wells. The UGRCA believes this language was agreed upon and should be included in the Record of Decision (ROD) for the EIS. 1

The UGRCA requests that the livestock permittee's continue to be a part of the Transportation Planning Committee, because roads and pipelines could have a very large impact on our ability to graze our allotments and trail our cattle. The UGRCA requests that a working group be established between all BLM grazing permittees in the PAPA, the BLM, and the operators to resolve any future conflicts. Those conflicts may include livestock struck by vehicles, shot or stolen livestock, damaged range improvements, soil-filled cattleguards and others. 2

The Significance Criteria 4.16.3.1 for the Grazing Resource needs to be changed. Those changes should reflect the concerns brought out by Albert Sommers in his letter responding to the Draft EIS. 3

The UGRCA understands and supports the rights of the oil and gas leaseholders to develop their leases. We do believe that a significant consideration should be given to our comments in this letter, because of the negative impacts that could occur to our livelihoods from the Pinedale Anticline Gas Project. The UGRCA requests that the BLM keep us informed and involved in all phases of the planning process for the project.

Sincerely yours,

Charles C. Price

Charles C. Price, Secretary
Upper Green River Cattle Association

LETTER 28

Klarén Cattle Co., Inc.
Brian R. Klarén
PO Box 213
Pinedale, WY 82941

February 2, 2000

Bureau of Land Management
Bill McMahan, Project Manager
280 Highway 191 North
Rock Springs, WY 82901

Sir,

I am submitting this letter as written comments in regards to the Draft EIS for the Pinedale Anticline Oil and Gas Exploration and Development Project in Sublette County, Wyoming.

I am submitting these comments on behalf of myself and my company, Klarén Cattle Co., Inc., which I am partners in with my brother Michael Klarén. Klarén Cattle Co. holds grazing leases in the Mt. Airie Common BLM allotment on the north end of the proposed anticline project as well as the lease to the Mocroft Ranch, which lies adjacent to the north end of the project area on the east side. Because of these two leases, I feel that the anticline project will have adverse consequences to not only my business, but also to the quality of life of me, my brother, and his family.

I will try to be brief with my comments.

As a citizen of Sublette county, a business owner, an outdoor enthusiast and a great admirer of the beauty of this area, I will be perfectly honest with you. I do not want this development to occur. However, I am realistic and I know this development will occur with or without my consent. In addition, I am not blind to the fact that this project will have significant positive impact to the economy of Sublette county.

My main concern lies with other resources that are within the project area and the negative impacts to them that may arise if the gas development project moves forward with no regards to these other resources. The resources that I am most concerned about are livestock grazing, wildlife, especially habitat for wintering mule deer and antelope, visual resources, and quality of life resources, i.e., noise, pollution, scenic value, and the overall impact of development of an industrial nature.

I am also very concerned with the possible negative impacts this project may have on my business. As a cattle rancher, I am dependent in part on the Mt. Airie grazing allotment as a source of grass for my cattle. Klarén Cattle Co. leases the rights to graze public ground just as the gas companies lease for the right of gas development. My business also adds thousands of dollars to the economy of this county, and though I realize it is slight when compared to that of even a single productive gas well, my grazing rights and my contribution to the economy of local community should not be overlooked simply because it pales in comparison to that of the gas industry.

1

It is my contention that all resources in the resource area are valuable, and developing one resource, in this case gas, should not be detrimental to other resources in the area. Therefore, I urge you to adopt the resource protection alternative as stated in the draft EIS. I also urge you to plan the development over a longer period of time than what is stated in the draft EIS. This would help to mitigate the negative impacts of development on other resources and would provide stability to the local economies for a longer period of time.

1

I appreciate the opportunity to express my opinions on this matter. Let me end by saying that this project will impact this area and all of its resources long after the gas reservoir has been depleted. Because of that, I hope the BLM realizes that its decision concerning the EIS now will effect generations to come and that every opportunity should be taken to minimize those impacts.

Sincerely,

Brian R. Klarén

Brian R. Klarén
Vice President,
Klarén Cattle Co., Inc.

LETTER 29

Sommers Ranch Partnership

P O Box 266
Pinedale, WY 82941
307-367-4756
jsommers@wyoming.com

"Home of Sommers Grizzly Tested Herefords"

January 31, 2000

Bureau of Land Management
Bill McMahan, Project Coordinator
280 Highway 191 North
Rock Springs, WY 82901

Dear Sirs:

I am writing this letter to respond to the Draft EIS for the Pinedale Anticline Oil and Gas Exploration and Development Project in Sublette County, Wyoming, which is to be referred to as 1793 (930) Pinedale Anticline DEIS. My family has lived and earned a living on the edge of the mesa for nearly one hundred years as a family ranch and grazing permittee on the mesa. Any industrial development as large in scale and duration as proposed in the Draft EIS has the ability to affect the way we live and make a living. The Draft EIS is one of the most truthful Environmental Impact Statements I have ever read concerning the impacts to both the natural resources and the people which lie within the area. Even though the Draft EIS is cumbersome to read, I find it very apparent that the consultants made every effort to show the multiple impacts that the Pinedale Anticline project will have.

The Pinedale Anticline project has the ability to affect the way I live both negatively and positively. I believe this project will negatively affect the way I earn a living and my quality of life. However, this project will generate both a product which I use (propane) and a tax base which my industry cannot replace. My comments on this Draft EIS will first address the corrections which I believe need to be made in the final document and the mitigation measures which are most important to me. Finally, I will try to give my personal impressions of the resource being impacted and the mitigation alternative which should be implemented.

Preserving adequate and safe drinking water for my livestock and myself is probably the greatest concern I have over this project. During the last two years, other grazing permittees and I have been working with the BLM and Ultra to ensure that the upper aquifers are protected from any commingling with the lower aquifers. These lower aquifers are used by the gas exploration companies for water supply wells. I was convinced that the BLM and Ultra had agreed to stipulate the isolation of the upper aquifers from the lower aquifers when any new water supply wells were drilled. I was under the impression that this "isolation" stipulation would be placed in the DEIS. In the DEIS, under 4.13.2.3, these stipulations are listed as mitigation opportunities. I fully believe these stipulations were to be placed in the ROD (Record of Decision) and not just listed as opportunities. I am very concerned that these "isolation stipulations" will be forgotten after they had been agreed to by the permittees, BLM and the operators. I would request that all four mitigation opportunities under 4.13.2.3 in the DEIS be implemented and stipulated in the ROD. 1

Surface water discharge and erosion is also an area which concerns me. Sedimentation could be increased in the intermittent streams that hold livestock watering ponds as a result of this project. If sedimentation is increased, livestock permittees will have additional costs associated with cleaning reservoirs more often than normal. I support surface water mitigation opportunity #9 in 4.13.3.3 and the monitoring recommendations made in 4.13.3.4.

The Pinedale Anticline project could result in significant disturbance to the soil resource in this semi-arid region where we live. One impact to the soil resource which concerns me is the installation of culverts in high flow intermittent drainages. Anytime a culvert is placed in a drainage with high seasonal flows, as can occur in draws on the mesa, you could significantly alter the energy regime of that intermittent stream. When energy is increased, impacts will occur downstream and significant erosion can result. I believe the BLM and the operators have learned this lesson before, and I hope care will be taken in placement of all culverts. I support soils mitigation opportunities #1 and#2 listed under 4.14.4.

The vegetation resource is the resource which my livestock utilize. I hope revegetation occurs as quickly as possible, and that great care is taken to ensure that invasive weed infestations do not occur. I support vegetation mitigation opportunity #1 and #2 in 4.15.4.

I have concerns with the way the 4.16 Grazing Resource Section was written. I do not disagree with the significance criteria in 4.16.2, however, I completely disagree with the order of their importance. In 4.16.3.1 Summary of Impacts Common to All Alternatives, the writers of the DEIS state "The primary impact to grazing resources within the PAPA would be the loss of forage associated with construction and production-related disturbance." The text in 4.16.3.3 Anticline Crest Scenario lists the potential loss of 320 AUMs for the 500 well alternatives, and this is considered to be a loss of 6.1% of the AUMs in these allotments. By itself, a loss of 5 to 6 percent of the AUMs for a five-year period does not really concern me because the livestock permittees on the mesa do not utilize the resource close enough that the loss of 5% of the grass will impact our operations or the resource. Three hundred twenty AUMs on an annual fee basis of about $2 per AUM are only a loss of around $640 per year. The really significant impacts of this gas development project are related in 4.16.3.1 where it states "Other impacts which occur include: displacement of livestock from preferred grazing areas and stock watering facilities or ponds; disruption of livestock trailing, damage to range improvements; the spread of noxious weed; and increased injury or loss of livestock from vehicle-livestock collisions or other incidents associated with oil and gas operations." I will try to give you some examples of the impacts which could occur and their associated costs to permittees. In 1998, the first year of the project, two yearling steers were hit during the month of June and one calf was hit during the month of October on county road #23-110. One of these yearlings was confirmed to have been hit by oil field traffic and probably all three animals were hit by oil field traffic. Virtually no cattle had been hit on that road in the last ten years. In 1999, livestock operators complained about the high speeds associated with the oil field traffic. As a result, the traffic slowed and livestock were no longer hit. Hopefully, speed limits will continue to be observed, but if they are not livestock deaths will certainly increase again. Those two yearling steers and one calf would have been valued at about $1900 using 1999 prices. Another impact that I already described was the 2

siltation of reservoirs from increased sedimentation of intermittent drainages. The cost of hiring equipment to dig out silted up reservoirs could run as high as one to two thousand dollars depending upon the amount of dirt removed and the transport costs associated with getting heavy equipment into isolated stock ponds. If cattle become severely displaced from preferred grazing areas and grazing impacts occur to other areas, then the BLM may have to make AUM adjustments or cancel grazing permits. If cattle are displaced from their preferred grazing areas due to development, permittees will have to build additional water sources to utilize other areas on the mesa. At the very least, displaced livestock could result in permittees having to hire additional riders to properly utilize the resource. Range riders cost $1000 per month in wages and a place to stay, if you have the good fortune to be able to hire a rider. Another potential impact could occur if large diameter (8" to 10") surface pipelines were to restrict movement of cattle into some grazing areas. Loss of grazing areas from surface pipelines or disruption of livestock by production operations could result in far more AUMs being lost than those associated with loss of forage from "production related" disturbance. The right invasive noxious weed could result in thousands of acres being lost to livestock use if it were to go undetected and left untreated. The consultants who wrote the DEIS picked the AUMs lost from "production-related" disturbances as the major impact to the grazing resource because it was easy to calculate. These other impacts are not as clear or well defined, but could result in far greater costs to livestock operators. I believe most of these impacts can be avoided if grazing mitigation opportunities #1 through #4 in 4.16.4 are implemented in the ROD. 2

Transportation planning is one of the most important and complicated challenges which the Pinedale Anticline project faces. The BLM's formation of a transportation planning committee has the potential to be very beneficial in locating proper corridors and informing other user groups of oil field development direction. I believe transportation mitigation opportunities #1, #2, #3, #5 and #7 should be implemented in the ROD.

Cultural and historical resources have always been of interest to my family. Both sides of my family have been ranching in Sublette County for nearly one hundred years, so in a sense, we are historical ourselves. My family has always enjoyed cultural resource issues and learning about Native-American peoples and their culture. Care should be taken to preserve important sites which may become uncovered during gas exploration. Prehistoric cultural sites not only tell us about Native Americans, but the sites also tell us about the climatic condition, the vegetative resource and the wildlife resource of the time period. These past conditions may help us explain what is happening today or even tomorrow. I believe all of the cultural/historical mitigation opportunities listed in 4.9.4 could be beneficial. On page 3-36, the Price Ranch is left out of the historic river ranches, even though the Price family has operated that ranch continuously since the 1890s. 3

One of the main reasons that I enjoy the Mesa and Sublette County so much is its abundance of wildlife. I enjoy the wintering mule deer herds, the sage grouse, the horned toads, and all other inhabitants of the high desert plateau called The Mesa. In developing this gas field on the Pinedale Anticline, great care should be taken to preserve this magnificent resource. Page 4-147 lists the causes for the decline in the sage grouse in the western United States. Most experts will tell you that the real cause for the drastic decline in sage grouse numbers is unknown. The reasons given on this page may have contributed to their decline, but none of them can explain this declining population. Cattle and their predecessor, the buffalo, coexisted with the sage grouse for centuries; therefore, I do not believe cattle have caused the decline in the sage grouse as this DEIS suggests. I would like to support wildlife mitigation opportunities #1, #4, #5, #6, #7, #12, #13, and #16. Wildlife mitigation opportunity #14 talks about constructing nesting structures for use by raptors. I believe this would be imprudent until the issues regarding the declining sage grouse population are better understood. More raptor nesting sites on top of the mesa will only pressure sage grouse nesting. Wildlife mitigation opportunity #15 talks about evaluating fences within the Pinedale Resource Area and the PAPA. Most fences in these areas are livestock allotment fences and private property fences which do not fall under the jurisdiction of this DEIS. 4 5

The Cumulative Impact Analysis for the Grazing Resource is completely inadequate. The consultants who drafted the DEIS only discuss AUMs lost from "production-related" disturbances. AUM loss from "production-related" disturbance is not even the greatest impact to the grazing resource from development of the Pinedale Anticline project. The consultants should combine all the impacts to the grazing resource to calculate a cumulative impact analysis after all the DEIS defines cumulative impacts as those that result from "the incremental impact of the action when added to other past, present and reasonably foreseeable future actions regardless of what agency (federal or non-federal) or persons undertakes such other actions. Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time." This gas project could have a future impact on the grazing resource if the sage grouse is listed and the mesa is designated as critical habitat for the species. The addition of a major gas development might threaten the habitat enough that all BLM permitted uses on the mesa may be revoked, including grazing. 6

I believe this project has the ability to negatively impact my family's ability to graze cattle on a piece of country that we have used for nearly one hundred years. I also believe that most all of the impacts to livestock grazing can be mitigated if the gas companies and BLM wish to do so. If the BLM consults with the livestock permittees during the planning phase of field development, I believe we can eliminate most conflicts to every body's satisfaction. The operators need to form a working group with livestock permittees to address livestock collision compensation, fences, cattle guards, and other problems which may arise during and after field development. 7

The next issue that I wish to address in this letter is how the Pinedale Anticline Oil and Gas Exploration and Development Project could impact my quality of life. When I graduated from college nearly twenty years ago, I could have worked anywhere in the United States, but I chose not to. I wanted to remain near my family and our ranch, but most of all I wanted to live in the most treasured piece of country I knew, Sublette County. In Sublette County, the one place I have come to love the most is The Mesa. Any large scale development of the mesa will impact the way I have lived and the way I wish to live.

Many of the pleasures and opportunities which I have enjoyed most in life will be impacted by the present and future development of Sublette County. The Pinedale Anticline project is just the latest development to be proposed that could impact those opportunities which make my life in Sublette County so enjoyable. I will discuss some of the opportunities which I enjoy most that could be negatively or positively impacted by this project. The opportunity to enjoy open-space and solitude is very important to me. To be able to ride a fresh, frisky horse from our corrals out to the top of the mesa and back without seeing or hearing anyone is a great pleasure though increasingly more difficult to do. The opportunity to watch a Hereford pair grazing a steep slope of a draw in the evening is both enjoyable and a necessity to me. The opportunity to ride a horse on the top of the mesa at day break and be surprised by a burrowing owl clattering out of a

badger hole is exciting. The opportunity in the late fall to watch sage grouse cross from the mesa to the soapholes to winter can be impressive. The opportunity to be part of a family that has enjoyed the wintering mule deer herds around and on our ranch for nearly seventy years is a unique opportunity. (My father never saw a mule deer in this county until 1931.) The opportunity to walk through the sagebrush in the summer and watch fat horny toads soaking up the sun makes me smile. Probably the greatest opportunity that I enjoy is to be part of a twenty-five hundred head cattle drive off of the mesa, and to be able to watch as cattle string out for nearly four miles on the third day of the drive. This spring gather is just one part of the seven thousand plus cattle drive which spans some seventy plus miles and takes two and one-half weeks. This cattle drive to the Upper Green has occurred every year since about 1916. I also enjoy the opportunity to be able to use a propane furnace which burns a clean burning fuel. I enjoy the opportunity to live in a county where the county roads are plowed promptly after every snow, which I know would not occur if not for oil and gas production in this county. I like the fact that old traditions and old places continue to exist in Sublette County. However, they are fading. I don't like the fact that places called the Bloom Ranch, The Mesa, Mt. Airy, Rocky Butte, Lovatt Draw, Soaphole Draw, Bertram Draw Blue Rim, Alkali, Sand Draw, Sand Springs, Yellow Point and Stud Horse Butte in the Green River Valley are now called Redstone and Newfork Social Club subdivisions, Pinedale Anticline Project area, the Jonah Field and worst of all the Greater Yellowstone Ecosystem. I do not like the impacts which could result from the Pinedale Anticline Gas Project, and selfishly I wish it were not occurring in an area which is sacred to me. However, I also recognize that oil and gas leases were issued and purchased in good faith. I fully understand and support the right of those lease holders to develop their leases in an economical manner. I fervently hope that the BLM and the gas operators will take the greatest of care in developing these leases in such a magnificent area.

In conclusion, I would like to offer the following suggestions. As I understand this DEIS, there is no legal limit to the number of wells which can be drilled or the time which they can be drilled in. I support the idea that after 350-500 wells are drilled or ten years has elapsed that another NEPA review of this project be undertaken to see what has changed in that time period. Probably only an EA will be required, but some public review is necessary on a project which has such potential to impact other resources. I support the Resource Protection Alternative coupled with the mitigation opportunities that I previously mentioned. I especially support the cap of five working rigs within the PAPA at anyone time. I believe a slower pace of development will allow for better planning and monitoring by the BLM. I believe a slower pace will also reduce the impacts to the various resources and make the project more acceptable to the public. I support the right of the lease holders to extract oil and gas in an economically viable manner. I believe that if the operators can show a significant economic loss as a result of implementing the Resource Protection Alternative then other alternatives should be considered. I believe it is time that the American public put their money where their mouth is. I support the concept in the Draft EIS titled 2.8 Royalty Rate Predictions. If the operators can show a significant economic loss from implementation of the Resource Protection Alternative then I believe it is only fair that the federal royalty rate be decreased for the Pinedale Anticline Project, and I support obtaining the statutory authority to do this.

The last comment I have regarding this Draft EIS on the Pinedale Anticline Gas Project is an issue regarding fairness. Livestock permittees holding grazing leases on BLM lands must now renew their permits every ten years under a NEPA review. If a NEPA review of livestock grazing on the Mesa Common Allotment were to show the impacts to the natural resources that this Draft EIS has shown can occur from gas development, livestock grazing would either be reduced significantly or ended entirely. I believe every permitted use or public use should be held to the same standards for resource protection. Instead, the livestock industry seems to be discriminated against because we do not have the money or the political clout to wage the war. This seems to contradict Section 4.3 Environmental Justice in this DEIS.

Sincerely,

Albert Sommers, Jr.
Sommers Ranch Partnership

LETTER 30

P. O. Box 44
Bondurant, Wy. 82922
December 19, 1999

Bureau of Land Management

Pinedale, Wyoming

Re: Anticline EIS

Dear Sirs:

We read with interest the articles in the Dec. 2 & 9th issues of the Pinedale Roundup concerning the BLM EIS for oil and gas leasing in the area. Of particular interest was the boxed commentary (see copy) relating to leasing in the Hoback Basin and Wind River Front, both private and Bridger-Teton.

We own 80 acres in Section 4, T36N, R112W, presently leased to UMC. I believe this lease expires in 2000 or 2001. Twenty years ago this area of Hoback Ranches was mostly undeveloped, but now has over 100 houses. It is also a wildlife habitat and migration route for moose, elk and mule deer. We feel that renewing leases in this area would destroy the recreational and wildlife values which become even more important as the southern part of Sublette County becomes saturated with drilling. 1

The Hoback Basin and Wind River Front, both BLM and Bridger-Teton, certainly qualify to offset "the dispersed recreation opportunities that will be lost in the Jonah and Anticline areas," as well as tourism and wildlife habitat.

In closing we would urge the choice of the Resource Protection Alternative for the development of the Anticline area, and the phasing out of any leases north of Pinedale. By your own admission, once there's a lease you have lost control of a valuable recreational and wildlife resource, and the Greater Yellowstone Ecosystem is an irreplacable asset.

Please put us on your mailing list for updates of hearings.

Sincerely,

William R. Olsen

William R. Olsen

Jane R. Olsen

Jane R. Olsen

LETTER 31

3894 East Viewcrest Drive
Salt Lake City, Utah 84124
(801) 278-0806 [Phone/Fax]

January 5, 2000

Mr. Bill McMahan
Bureau of Land Management
280 Highway 191 North
Rock Springs, Wyoming 82901

Re: Pinedale Anticline Natural Gas Exploration and Development Project Draft Environmental Impact Statement

Dear Sir,

I have reviewed the PAPA DEIS and Technical Report. The basis for my comments is my forty years as a professional geologist. In 1958, I received my Geological Engineer degree from the Colorado School of Mines and two years later my Master of Science in geology from Northwestern University. My employment includes six years in petroleum exploration with Standard Oil Co. of California (Chevron); seventeen years in uranium exploration and base metals with Getty Oil and eleven years in groundwater protection with the State of Utah, where I developed their groundwater quality protection plan and wrote their groundwater protection regulations. I am a registered geologist in California and a member of over 25 years of the American Association of Petroleum Geologists.

At the outset of the DEIS (pg. 1-1), this document states "...the BLM's Pinedale Field Manager approved limited exploratory drilling (45 wells) in unexplored areas in Sublette County in a May 7, 1998 decision letter. The purpose of the limited drilling was to determine:

(1) • the external limits of a potential gas reservoir on the Pinedale Anticline;

(2) • if and where commercially developable areas of natural gas occur off of the Pinedale Anticline;

(3) • whether 'pad drilling' (re., drilling multiple wells or bottomhole locations from a single well pad) was technically and economically feasible; and,

(4) • the nature of the geology which is essential to defining the extent of field development in the project area."

The BLM and their DEIS contractor have failed to deliver any information on (1), (2) and (4) and biased the conclusions on (3). Yet at the very beginning, they recognize that this information is "essential" to defining the extent of field development in the project area! 1

To accurately predict the areas of surface impact, the BLM must develop a comprehensive picture of the geology and natural gas reservoir on the Anticline to include:

1) Structure contour maps on multiple geologic horizons;

2) Geologic cross-sections of the Pinedale Anticline utilizing well logs of the drill holes;

3) Complete tabulations of the production, formation tests and drilling histories of all wells that are within the PAPA;

4) Define, on maps, the indicated external limits of the gas reservoir and indicated off-structure areas of commercially developable gas;

5) Determine the extent and importance of crestal fractures along the crest. If present, such fracturing could dictate that holes be directionally drilled to intersect significantly more fracture zones, and thus enhance production.

2

Operators and government officials frequently plead, "We don't have enough information," to describe the geology of the Pinedale Anticline. They neglect these facts:

1) The first well was drilled on the Anticline over sixty years ago and the count is now about 50 wells;

3

2) During the late sixties, substantial amounts of information was developed and published in connection with Wagon Wheel. The question, why wasn't it used for the PAPA DEIS?

4

3) Seismic techniques have been perfected to actually "see" buried gas deposits. Wouldn't utilization of available seismic surveys enhance drilling success and geologic interpretation?

5

4) The operators have substantial technical staff probably numbering over one hundred personnel. On the BLM interdisciplinary team of 26 people, the BLM has one geologist! Why doesn't the BLM have an adequate staff to develop the geologic interpretation they admit is "essential?"

6

Of course, the BLM does have a sister agency within the Department of Interior that has perhaps the finest geologic staff in the world, the U.S. Geological Survey. Yet, the U.S.G.S. was not a participating agency. Why, when the geology is "essential?"

7

5) The Jonah II field lies on the southwest flank of the Pinedale Anticline. What were the "lessons learned" from its development? That is, what limits the areal extent of the gas reservoir? Are the reservoir rocks different from those at the Pinedale Anticline? Has the regional stratigraphy, facies analysis, and depositional environments been studied and do these studies indicate potential areas for gas development on the flanks of the Pinedale Anticline? Such studies must be made at Jonah II, as well as the Pinedale Anticline, in order to understand the geology and the nature of the gas reservoir.

8

To date, the "essential" element, the geology of the Pinedale Anticline has been ignored. Less than one page of the DEIS is devoted to describing the subsurface geology of the Pinedale Anticline and the sequence of formations present.

9

Knowledge of the geology and stratigraphy of the Pinedale Anticline is essential to appraising surface resource impacts. It is incumbent on the BLM to fully describe the geology in reputable professional journals and subject them to peer review or alternatively in publications of the U.S. Geological Survey. If not, the U.S.G.S., then these studies should be done by competent, experienced petroleum geologists and geophysicists that are familiar with Wyoming geology and are registered geologists in Wyoming. Only then can the surface impacts be delineated.

Yours,

Robert P. Barnes

Robert P. Barnes

LETTER 32

DOUBLE EAGLE PETROLEUM AND MINING COMPANY
777 OVERLAND TRAIL P. O. BOX 766 CASPER, WYOMING 82602

PHONE 307 / 237-9330
FAX 307 / 266-1823

January 6, 2000

Mr. Bill McMahan, Project Manager
Department of the Interior
Bureau of Land Management
280 Highway 191 North
Rock Springs, WY 82901

RE: Pinedale EIS

Dear Mr. McMahan:

Double Eagle Petroleum and Mining Company owns oil and gas leasehold interests within the above referenced area in which you are conducting an environmental impact statement.

As your analysis already states, this area was leased for oil and gas in the 1950's. Actually, the first well drilled on the Pinedale Anticline was drilled in 1939 to a depth of 10,002 feet and first production was established in 1955 from a depth of 9,420 feet. Virtually all the lands in your study area are currently under lease and the operators will be drilling most of their wells on these same old leases issued by the federal government in the 1950's. These lease contracts were authorized by the federal government and when issued, contained no surface occupancy restrictions. Oil and gas operators do not desire to destroy the environment but do wish to develop their leaseholds. BLM wishes to develop land use measures designed to create the least amount of disturbance. Both of these goals can be accomplished.

The Pinedale Anticline is known for its vast amount of gas bearing, but tight, zones with very little associated water. Productive zones are typically very hard to correlate from well to well. Therefore, development at fields in this area, in particular Jonah Field, have demonstrated reservoirs may require well density as high as 40 acre spacing to drain the recoverable reserves. Until more wells are drilled, no one knows what well density will be required. If the Pinedale Anticline is fully developed, the State of Wyoming and the Federal Treasury stand to benefit through royalty and taxes applicable with the drilling and production. Pipelines are also a vital component of this development. Restricting the growth of either drilling or pipeline construction has a similar effect on the other one.

To date, Double Eagle has participated in drilling two wells to depths of 13,000 feet, 8 miles south of Pinedale with several others planned. The first well was drilled vertically. The second

well was drilled very close to the first well's drillpad and deviated to bottom hole some 1,400 feet south of its surface location. Since the wells were recently drilled and still in their respective completion phases, actual total costs are not available yet. However, the estimated costs of each well differed by $650,000, attributable solely to the costs associated with deviating the wellbore from its wellpad. The strategy of locating several wells on one wellpad is being proposed by BLM for the full development of the Pinedale Anticline. If just 1/3 of the possible wells require deviated wellbores, the various operators will incur a great additional expense to develop their leases and still comply with BLM's land management plans. BLM should not propose this strategy unless it can remedy this issue. Operators would embrace the idea of a royalty reduction plan to recover these additional costs. In addition, I feel confident the state's Congressional Representatives would offer to introduce legislation needed to accomplish this alternative if BLM and accordingly the Department of Interior, would request and endorse their actions. I hereby request BLM make this request immediately. 1

For the reasons stated above, BLM should allow the development of the Pinedale Anticline to occur at the greatest well density possible subject to a "low impact" surface disturbance strategy. The economics experienced by the operator once the structure is developed will have the greatest impact on the decision to drill additional wells. However, BLM should not initially require the "low impact" surface strategy be implemented until Congress approves a royalty reduction plan to offset these great additional costs since the costs are directly related to BLM's desire for minimal disturbance.

Thank you for the opportunity to comment on the Pinedale Anticline Environmental Impact Statement.

Very truly yours,

D. Steven Degenfelder
Vice President

CC: Patti Smith
Senator Craig Thomas' Office

LETTER 33

THOMAS B. ROSSETTER
990 N. Fall Creek Road
P.O. Box 396
Wilson, WY 83014
(307) 733-7764
Fax: (307) 733-0885

January 6, 2000

Bureau of Land Management
Mr. Bill McMahan (Project Coordinator)
280 Highway 191 North
Rock Springs, Wyoming 82901

Re: Pinedale Anticline Natural Gas Exploration and Development Project
Draft Environmental Impact Statement

Dear Sir:

Thank you for soliciting comments and suggestions regarding the excellent and comprehensive DEIS on the Pinedale Anticline Project Area. Further, I congratulate the authors on recognizing the potential severe negative impacts on both the human and natural environment, suggesting levels of development and mitigation alternatives which would work toward minimizing those impacts while at the same time permitting full and profitable development of the gas field.

I agree with the DEIS that it is not possible to develop the Project Area without severe negative impacts on the human and natural environment. However, I also believe it is possible to minimize those impacts by the utilizing the provisions offered by the DEIS and through the determined cooperation of the BLM, other governmental agencies, the developers and the local community to effect a balanced and thoughtful development of the gas resource.

Obviously, the added protection of the natural and human environment would come at some cost to the developers, but by the same time development, even under the most stringent of the protection alternatives, comes at a comparable or greater cost to the natural and human environment.

Specifically, I strongly recommend the following:

1. The adoption of the Resource Protection Alternative for All Lands and Minerals (versus the Standard Stipulations) as well as the implementation of the Mitigation Opportunities suggested for the various areas of impact including, but not limited to, residential areas, viewsheds, groundwater, surface water, wetlands and riparian resources, wildlife etc. all as outlined in Chapter Four of the DEIS. This becomes critically necessary in such specific areas as the the New Fork and Green River corridors

2. Based on my observations of the wells being drilled on the Mocroft Ranch adjacent to my property on the New Fork River the distance from well pads to residences should be increased to one-half mile in order to reduce the noise level at the residence as well as the impact of artificial light and odors and, quite possibly, dangerous gas emissions. 1

3. No wells should be permitted on the face or rim of the of the Mesa. 2

4. The DEIS repeatedly recognizes that an extremely large area of negative impact occurs on private lands (30,000 acres) and State lands (10,000 acres) along the New Fork and Green River corridors and over which the BLM has no regulatory authority. These corridors are perhaps the most environmentally productive and sensitive in all of Wyoming. What possible logic could dictate the potential partial destruction of these areas --- especially when they represent such a small percentage of the total Pinedale Anticline Project Area (200,000 acres)? Leaving such a yawning gap in protection defies all common sense. This is correctable if the the developers choose to voluntarily implement protective procedures and/or if Federal, State and County agencies act to enforce such procedures.

In the event the developers are unwilling to voluntarily adopt similar protection procedures on private and State lands as the BLM may call for on sensitive BLM lands, then I suggest the BLM use its good offices to persuade all other governmental agencies to mandate, within their power, such comparable procedures. 3

For example, pads should be limited to one per section (640 Acres) on environmentally sensitive BLM, State and private lands. Pad drilling should be encouraged to allow better exploitation of the gas therein. This would better protect a number of overlapping areas of concern such as the foreground of the Mesa viewshed, flood plains, wetlands, moose and deer habitat, raptors as well as proximity to residential areas. 4

Adoption by all concerned of the recommendations above will not fully protect the human and natural environment from significant negative impacts. However, it would provide some protection while at the same time permitting profitable exploration and development of the Project Area.

I suspect the DEIS best represents the view of most Sublette county residents in the following quote, "....while expressing concern, very few residents have opposed continued gas exploration and development within the project area. Rather, they plead for orderly and controlled development that preserves the values and natural characteristics most important to the area's quality of life."

The BLM, along with Federal, State and County agencies, has the power and tools to promote a reasonable balance between exploitation of the gas reserves and protection of the human and natural environment not only on the BLM lands but on all lands within the Pinedale Anticline Project Area. It is my hope the BLM will take a proactive leadership role in effecting reasonable environmental protection of the entire Project Area.

Very truly yours,

Thomas B. Rossetter

cc: Wyoming Oil and Gas Conservation Commission
Al Pierson, State Director, BLM
Wyoming Game and Fish Department
Department of Health
Department of Environmental Quality
State Engineer
U. S. Army Corps of Engineers
U. S. Fish and Wildlife Service
U. S. EPA Region VIII

LETTER 34

1/9/2000
To: Bill McMahan/RSFO/WY/BLM/DOI@BLM,
"'tom_fry@blm.gov'" <tom_fry@blm.gov>
cc:
Subject: reduced impact to Green River basin

I would like to add my voice to those who oppose full-scale industrialization of the Green River Basin. Please consider proposal which minimize the impacts of new roads, pipelines, powerlines to this area. Any development in the open spaces of Wyoming need to be carried out VERY JUDICIOUSLY in order to preserve the unique natural aspects of this state. I really wish we could scale back the current commitments to oil and gas development as it is. 1

A slow erosion and exploitation of Wyoming's natural resources will eventually turn this part of the country into something more resembling the wastage around the Caspian sea; I will live here as long as I can feel proud of Wyoming's stewardship of this unique area. Your office has an important role in doing more than simply parceling out public land for private profit.

Thank You,

Dean Roddick
1407 Steele St.
Laramie, WY 82070

LETTER 35

1/9/2000
To: Bill McMahan/RSFO/WY/BLM/DOI@BLM
cc: tom_fry@blm.gov
Subject: Pinedale DEIS

RE: Pinedale DEIS

It seems like a good time for the BLM to update its "Lease now, think later" policy that has been one of the guiding principles of BLM protocol since its inception.

This style of land administration may have been accepted in the 1950's, but now we have a much more detailed understanding of ecology and our effect on various systems, and it is no longer acceptable to function in such an ignorant manner. Don't give away leases without an EIS to determine the consequences of giving away the lease rights. Only an idiot (or one guided by the interests of the lessee) would give lease rights without understanding the consequences of such an action.

Executive Summary Page 1, para 2 - "The only way to eliminate these impacts.....which the BLM cannot do."

This statement leads the reviewer to believe that this is true when in fact it is not. There are 2 options I know of a) repurchase the lease rights. b) The head of the Dept of Interior has power to take back lease rights

1

ES Page 2, para 2 - "A few hundred wells restricted to the crest may not result in.....if adequate mitigation is applied."

This statement is another baseless assumption. A few hundred wells would have a devastating effect to the area. Even the wells that have already been drilled have permanently degraded the area. A real effect of a few hundred or nearly 1,000 wells in the anticline area in hard to even imagine with out a trip to New Jersey. An ""Industrialized-appearing" setting" (p2, para 3) is one way of describing it.

2

8 well pads per mile translates into a well every 1760 feet

4 well pads per mile - "At 4 well pads per square mile the level of development is not expected to overwhelmingly dominate the natural landscape." Only someone from New York City could make such a statement with a straight face. The DEIS tells the reviewer to believe this.

3

ES Page 2, para 4 - "Many of the benefits that people enjoy in Sublette Co are a direct result of contributions to the local economy by the oil and gas industry". The truth of the matter is none of the benefits of living in Sublette Co are a result of oil money. In fact, much of the problems facing the county are caused directly by oil and gas development.

4

Another classic psychologically manipulative sentence - "Without these revenues, the economic prosperity that SC now enjoys would quickly disappear..... Fortunately for county residents, revenues from oil and gas production should continue for the foreseeable future." Ultra and McMurry could not have written it better if they had written it themselves (which they obviously did).

4
5

Jonathan B Ratner
PO 1277
Pinedale, WY 82941

- att1.htm

LETTER 36

1/10/2000
To: Bill McMahan/RSFO/WY/BLM/DOI@BLM
cc:
Subject: Green River basin oil/gas exploration

Hi Bill:

Just received a flyer in the mail dealing with upcoming leases in the Green River basin area - like all good taxpayers, I would like our country to be more self sufficient for producing its own crude instead of relying on the oil cartels in the middle eastern countries but at the same time, don't want to see the vast wilderness areas exploited to literally run the wild life off their lands due to new projects of drilling when there is already oil wells in the vicinity. Please consider these measures when these leases come up for renewal. Thanks for listening. 1

Sincerely,
Ron K. McDonald
Tetermax@Wavecom.Net

- att1.htm

LETTER 37

1/11/2000
To: Bill McMahan/RSFO/WY/BLM/DOI@BLM
cc: Barbra Cubin <cubin.webmaster@mail.house.gov>, Craig Thomas <craig@thomas.senate.gov>, Jim Geringer <Governor@missc.state.wy.us>, Mike Enzi <senator@enzi.senate.gov>, Tom Fry <tom_fry@blm.gov>
Subject: Pinedale Anticline Natural Gas Exploration and Development Project DEIS

Dear Bill-

Wyoming oil & gas development is important for the peace and safety of the United States. I support the development of the Pinedale Anticline Natural Gas Exploration and Development Project, with the stipulation that regulations be fairly and equitably enforced.

I believe that wildlife adapt to oil & gas exploration as long as the water is not poisoned, and the animals are not boxed in. Encouraging companies to use horizontal drilling techniques to minimize disturbance by having multiple wells drilled from the same pad, makes good land management and economic sense. Wyoming's clear skies are important, so dust and emission laws need to be fairly enforced. Development needs to be done with an eye to what is right for future generations, so we should take what we can economically produce without waste, and minimize pollution and land scars. 1

Wyoming and the USA need resource production, or we will go to war for energy again. Don't let one company have an economic advantage over another by cheating the rules and regs. With a level playing field, the best managed companies will figure out a safe, clean, efficient method of producing domestic resources. That will give them an economic advantage that well managed companies deserve, if you don't change the rules when someone asks for a special favor.

Ted Lapis
1726 Warren Ave.
Sheridan, WY 82801
(307) 672 0062

copy: Tom Fry
Representative Barbara Cubin
Senator Mike Enzi
Senator Craig Thomas
Governor Jim Geringer
- smime.p7s

LETTER 38

1/13/2000
To: Bill McMahan/RSFO/WY/BLM/DOI@BLM
cc:
Subject: More drilling in the- Dubois to Pinedale area.

To whom it concerns

The Green River Basin is very dear to those of us who live in these connected areas. We oppose oil and gas industrialization in this area-The Wildlife- particularly Pronghorns depend on this whole area for continued survival here in Wy. 1

Bernard and Leota Didier
Box 761- Dubois, Wy. 82513

Sincerely,
Leota Didier
(307) 455-3615

LETTER 39

 January 13, 2000

Bureau of Land Management
Bill McMahan - Project Manager
280 Highway 191 North
Rock Springs, WY 82901

Dear Mr. McMahan:

Reference: Draft Environmental Impact Statement, Pinedale Anticline - Oil and Gas Exploration and Development Project, Sublette County, Wyoming.

Having attended the BLM hearing in the Pinedale School Theatre on January 12, 2000 I appreciate this opportunity for comment.

When discussing the aspect that development in Sublette County could lead to "Third World" living conditions (human health), as expressed during comment, I found no evidence of support. To the contrary, our Nation has sufficient protections in place (EPA, USFWS and Army Corps of Engineers) to protect our environment. Pharmaceuticals rely on the minerals industry and the benefits derived from Multiple-Use of public and private lands. Cultural history denotes an increase in the Public's health (medical) over our previous 200 years.

The "quality of life" is enhanced for the greater number of peoples solely by the development of non-renewable as well as renewable resources. A "not in my backyard" (NIMBY) attitude concerning the multiple uses of properties has exported uninhibited damage to other parts of the world. Timber harvest restrictions for example, can lead to "Third World" practices in silviculture by "Third World" countries attempting to fill our void caused by the closure of our Nation's forests to logging. 1

In the same context, exporting our mineral industry to "Third World" countries, while oil & gas supplies are in demand, tends towards a destabilizing effect on balances of power worldwide. The expense to "quality of life" during and after the Persian Gulf War should be remembered when our available resources are placed off limits.

The ongoing development and the proposed Pinedale Anticline are a substantial component in the economic "lifestyle" of Sublette County as well as the State of Wyoming. Do we also allow our children's education and portions of America's future to lay dormant because of NIMBY attitudes?

School District No. 1 and No. 9 in Sublette County will not persist at present levels without development. The assessed values for Fiscal Year 1998-99 (attached) are:

- School District No. 1 - **$8,008,495.93**
- School District No. 9 - **$5,323,057.34**

Area property owners by themselves will be hard pressed to sustain the present level of funding without Multiple Use factored into the equation (Attached County records-1999, 3 pages). Who, opposing this proposed development, have presented documentation that speaks toward the sustainability of Wyoming's system of education? This in the future should be a point of mitigation.

LETTER 40

In 1999, President Clinton issued Executive Order 13123 - Greening the Government Through Efficient Energy Management. This Order addressed the development and use of renewable energies such as biomass, solar, geothermal (Yellowstone comes to mind) and wind power. It relates to the *futuristic* technology available in quantity for construction of "integrated whole building designs". President Clinton however, took note to state, "Agencies shall take advantage of competitive opportunities in the electricity and natural gas markets to reduce costs and enhance services." (E.O. 13123, Sec. 404. (a)).

This Executive Order applies to all Federal buildings whether they exist in natural gas production areas or otherwise. Does Sublette County produce just enough natural gas to sustain their quality of life, or through multiple uses do we export the means of "quality of life" to others not so fortunate while renewable energies are placed on line?

This project is being mitigated to death. Natural gas is needed by more than just "we" in Wyoming.

Cordially,

Randy Shipman
P.O. Box 1046
Rock Springs, WY 82902

1

1/13/00

Bill -

See, you thought when I retired you were finally free of my advice and plan input, but as you can see I have joined the ranks of those who keep an eye on Federal and State land management actions from the private section. Enclosed is a copy of a bulletin I received. They make a number of recommendations that they believe will reduce environmental impacts in the plan area. I am sure that your wildlife specialists are also advocating similar actions and the Resource Protection Alternative. However having worked on BLM plans I also know that BLM pays about as much attention to their specialists advice as it does to the advice of its economists. The natural resources of this and our neighboring States in the next 100 years are going to be more in demand for recreation than for energy. New technology will replace our current means of generating heat and power - the use of gas and oil for these purposes will be minimal. Each building will have its own heat and power facilities -- those companies as we know them will probably not exist. However what will exist is an increased need for open spaces and unspoiled natural settings for increased populations to recreate. My advice is for BLM and other agencies to manage their lands with this in mind. The picture on the front of this card reminds me of Hilden when we'd try to give some economic info. but hardly was it interesting to take seriously. Take care. Sincerely Carl J Stenhouse

1

LETTER 41

January 14, 2000

Bill McMahan
Pinedale Anticline Project Manager
Bureau of Land Management
280 Highway 191 North
Rock Springs, WY 82901

Dear Mr. McMahan:

After attending the meeting in Pinedale on January 12 -but not speaking-it became clear part of the EIS focuses on economic aspects of the project. There was some testimony regarding the importance of the economic benefits.

This letter addresses the economic issue. As you will see, I am not providing documented evidence supporting the following opinions; however, I believe some of the assertion herein are evident based on past results.

The fundamental economic flow is as follows: First, exploration occurs after which wells are drilled. This phase includes the purchase of material, most of which is manufactured in a state other than Wyoming. It also includes labor (employment) most of such personnel come from another state, and contribute to the local broad economy only while they are here, which ordinarily is not permanent. After the wells are drilled, such persons commonly travel to another location in another state or country and continue in the same employment. So employment is short lived.

The second phase is placement of the pumping equipment and pipe lines or other transportation systems. The material and employment for this is the same as described in the preceding paragraph for drilling.

When the wells begin production, employment falls significantly because few persons are needed to monitor the system. There would be an increase in local employment which might be more long-lasting, but is permanent only until and unless the wells remain in production. A drop in market price, which can happen any time, usually results in shutting in the wells and the monitoring employees no longer are employed locally.

With respect to employment, the work force generally consists of technical personnel and basic laborers. "Management" type employees, who are career persons and who earn higher than average compensation, usually will not participate and live in the local area. They are in Houston, Dallas, Chicago or other corporate locations.

During the phases of economic activity described above, the principal beneficiaries are governments-federal, state and local governments who initially receive sales taxes and eventually receive royalties and pay property taxes. In other words, the prime

1

5-127

beneficiaries of the monies expended are governments rather than the local worker or the local businesses.

The value of the product (natural gas) is exported to locations outside the state, and further processing, and the movements of the product which generate economic benefits are outside of the state, certainly, outside Sublette County.

Now, back to the main beneficiaries of the money; the government (s). The best economic model is that (1) value is created from a natural resource (2) that value is realized through activities of labor, capital and material necessary to "manufacture" the resource (3) the end products is distributed to the market. Each of those phases results in values which are taxed (incrementally and by various taxation forms) by various governments. Those governments receive a part of the value created, after everbody else has already got theirs.

In this case, the value goes directly from the producer of the resource to the governments-sales tax, royalties and taxes on production. In other words, the "middle" of the best concept (see above) does not exist. This tax flow causes government to be bloated, since they are the first (excluding the producer) to receive the benefits. Government then proceeds to spend or save the money. Some of the spending programs are excessive and are not necessary for core government services. (This is why, in Wyoming, one of the largest employers is government at all levels.)

Once the Pinedale Anticline is done and producting, there will be little continuining economic benefit to Sublette County and its residents, that is, except governments.

1

It then is not uncommon that supply exceeds demand, market prices drop, and wells are shut in or abandoned. If government has spend some of the money on infrastructure in anticipation of continued production, it is left with excessive facilities which the remaining population (who had nothing to do with the economic activity) has to pay for.

As evidence, look at Evanston during and after the boom days of the late 70's and early 80's. The bust happened, hundreds of homes were foreclosed, banks went bankrupt, and the town almost died. The production companies were gone.

In the long term, Sublette County residents will fare much better by taking advantage of the other natural resources, clean air, water; wild game; fisheries and recreation otherwise. That activity is much more stable economically than gas production. Compounding the issue is the high probability than gas activities, if not carefully controlled, will cause blight and resource damage which will make Sublette County less attractive for these other purposes, and these other economic benefits.

Sincerely,

George D. Funk 2 Antelope Trail Pinedale, WY 82941 307-367-6648

LETTER 42

January 14, 2000

Bureau of Land Management
Mr. Bill McMahan, Project Manager
280 Highway 191 North
Rock Springs, Wyoming 82901

Re: Comments on the draft Environmental Impact Statement (DEIS)
for the Pinedale Anticline Project Area (PAPA)

Dear Mr. McMahan:

I would like to begin my comments by acknowledging the preparers of the DEIS for thoroughness and impartially in preparing this statement. From the beginning of the scoping process through this DEIS I have been very concerned as to the outcome of this proposed development.

The National Environmental Policy Act of 1969 (NEPA) requires that all Federal agencies use all practicable means to minimize any possible adverse effects of their actions upon the quality of the human environment. The DEIS analyzes the probable and known environmental impacts upon the human and natural environment from the alternatives for the continued exploration and development of the gas resources in the PAPA. Since there is an obvious incompatibility with developing the gas resources and protecting the human and environmental resources, a balance must be achieved. The operative word here is balance. The 500 or 700 well alternatives are not balanced options. The area has been surveyed using 3D seismic technology. This technology should be able to provide both the BLM and the gas producers with concrete geological data as to where sufficient gas finds are located. With this in mind, a phased development should occur. Also, in order to comply with NEPA, it may be necessary to curtail development of all of the 200,000 plus acres in the Pinedale Anticline. This may mean deciding on the "no development" scenario, even though it is supposedly "not an option," since the leases have been granted. The option of using the data to curtail drilling to 100-300 wells, using the most advanced techniques available should be reviewed and perhaps acted on. The NEPA has worked with the Dept. of Interior on projects where new stipulations have been made on existing leases (Flower Garden Banks in north western Gulf of Mexico). The BLM should have had the foresight to see this (PAPA) conflict before the leases were granted. I urge the Pinedale BLM to take similar mitigating actions as the Flower Garden Banks.

1
2
3
4

Below is a breakdown of my concerns. I have tried to include all of them, however, I may have omitted some. I would like to blanket my comments by saying that all environmental impacts and human impacts should be mitigated to the fullest extent possible, so as not to overlook any impacts. I realize that this comment letter is intended for federal lands, however, I would like to call on the Sublette County Commissioners and the State of Wyoming to become pro active in legislating rules and regulations to protect land owners who do and do not own the mineral rights.

ALTERNATIVES/SOCIOECONOMIC RESOURCES:
Both the 500 and 700-well scenario seem excessive. I would hope that the BLM could limit this to a much lower figure. Since most of the literature seems to indicate that the gas is more likely on the crest of the anticline, drilling should be limited to that area, using the RPA guidelines. Since the Air Force has gotten a 6-mile buffer around their seismic equipment, I feel that the Town of Pinedale should be warranted the same type of buffer. This would eliminate the problems (noise, air emissions, lights, intrusion to privacy etc.) associated with wells to close to residential homes. For private property, which I realize is not under the jurisdiction of BLM, only directional drilling should be an option to safeguard the buffer zone and maintain environmental integrity. The gas could be developed and Pinedale could keep the small western town atmosphere. It would at least eliminate the risk of declining property values and the issue of hazardous air emissions. Many businesses in Pinedale rely on the summer tourist trade. Having a buffer around the Town of Pinedale would also ensure that this tourist trade is not affected by the drilling. It would also help keep the air quality of the Wind River Mountains/Bridger Wilderness safe. Just because emissions do not exceed limits does not mean that they are good. There is no industry now harming the air quality. It is unconscionable to subject the people of this town to any risk, what so ever, in the name of money (taxes, royalties, etc.). I do not know the exact figures, but I do not think the money that would be brought into Pinedale businesses from motels, restaurants, food, gasoline etc. is more than what is currently brought into Pinedale businesses from the tourist trade.

1
2
5
6

TRANSPORTATION:
With a reduction in the amount of well pads/wells, the need for roads is also reduced. With development of gas, the roads should be placed in areas with the least intrusive environmental consequences to wildlife and soil resources as is stated in the RPA. I also feel that since the financial benefit will be to the gas companies for this gas, they should be required to accept at least 75% of the burden to build and maintain needed roads.

7

RECREATION RESOURCES:
The BLM has not only the duty to comply with the lease holders request to develop the gas resources, but to protect the public. The anticline has been a place of recreation and solitude for many years. There is no reason that this should have to change simply in the name of gas development.

AIR QUALITY:
The BLM and the State of Wyoming have an obligation to the citizens of Sublette County to protect them from having to breathe unhealthy air. Why do we have to wait until there is a problem to change something? Perhaps the answer lies in capturing the emissions in a closed loop system.

8

GROUND WATER:
The amount of groundwater to drill 1 well is approximately one million gallons. A conservative estimate is that with 700 wells, the ground water would be lowered 40-45 feet in 30 years.

9

Perhaps water could be trucked in or the number of wells drilled lowered to an acceptable amount. A hydrologist should be retained to provide an expert opinion regarding exactly how much water is available, and how much water can safely be utilized without significantly lowering the water table.

HAZARDOUS WASTE:
Presently, the proposed method of disposal of hazardous waste is to evaporate the liquid and bury the liners. I feel that all the hazardous waste (including the liners) should be drummed and shipped to a hazardous waste facility. The companies should be made to comply with the rules and regulations in RCRA for hazardous waste disposal. The soil should be tested, if contaminated, treated, then reclaimed. I also feel that there should be some sort of financial assurance (bonding) that waste disposal and land reclamation will be done in an environmentally sound and timely manner, meeting the most stringent standards available at the time of disposal and reclamation. This is in addition to bonding to ensure that the land will be reclaimed after drilling is completed. Perhaps the interest from these bonds could be used to fund part or all of the reclamation. 10

USE OF PRODUCTS:
Products and materials used at the drill site should be the least hazardous materials available to accomplish the needs of the activity. Since the gas companies are on Federal land, and the Federal government requires this of their contractors and subcontractors, the gas companies should be held to the same standard. No products containing ozone depleting products should be allowed in this development area. 11

WETLANDS:
The Federal government protects wetlands. All the wetlands, even on private lands, should be protected. A buffer zone of 1 mile should be mandatory. Since most of the wetlands lie on private land, a buffer around the town of Pinedale would solve this problem. Directional drilling could be applied to these areas. 12

HISTORICAL LANDMARKS:
These areas should be preserved. No mining should be allowed near or in these areas to protect the aesthetics of the landmark. I have not listed these concerns to try and be difficult. I feel that if the gas companies had come into this area with a plan to impact this area as little as possible, none of this would be necessary. 13

WILDLIFE:
Wyoming Fish and Game should be consulted regarding the stopping or curtailing of hunting in the area of development. This would give the game a chance to recover and is also a safety issue to the people working on the drilling rigs. Once the wildlife is gone, it is gone. One only needs to look to other parts of the country. 14

In conclusion, I feel the gas companies have shown their true "colors" by what has happened in Jonah II and what has happened with the exploratory wells and wells on private property. I will urge the Sublette County Commissioners to take whatever steps are necessary to preserve the unique qualities of this town and protect the residents of this town.

I realize that you are looking for concerns with possible answers, however, I am not a federal employee with inside know how, or an elected official with some sort of "pull," so I can only offer solutions that are unfortunately non technical. Let your conscience be your guide and try and do what is right for the citizens of this area.

I again urge the BLM to act in the interest of all the people, not just a select few. Once a valuable resource is gone, it is gone. I realize that the gas will be developed, I am only requesting that it be done in an environmentally responsible manner, and that the people who live in this beautiful area can continue live in a beautiful area.

Sincerely,

Susan Kramer

Susan Kramer
P. O. Box 55
Pinedale, Wyoming 82941

Phone: 307-367-2394
E-mail: mkramer@wyoming.com

LETTER 43

1335 Rumsey Avenue
Cody, WY 82414
January 14, 2000

Mr. Bill McMahan, Project Manager
280 Highway 191 North
Rock Springs, WY 82901

Dear Mr. McMahan:

Re: Industrialization in the Green River Basin

In the DEIS of the BLM the results indicated this development project will have significant impacts on water and air quality and wildlife populations. It seems difficult to stop greed and development so it is very important to scale everything back to reduce the negative impacts of the project. 1

I urge the BLM to choose the Resource Protection Alternative to lessen irreparable damage. What is lost can never be regained. Short term gain from greed causes lasting devastation to the biodiversity of the area. This Pinedale Project Area is very close to sensitive wilderness and roadless areas.

Thank you for doing what is best for a natural area.

Sincerely yours.

Ester J. Murray

Ester Johansson Murray

LETTER 44

Sandy Wyo
1-15-2000

Dear Bill McMahan Project Mgr
Rock Springs Wyo
I am writing to you to voice
My Concerns about this new pro
ject of Leasing. Please do not Renew
the Leases on the grounds on the
Pinedale Green River Basin Area. Please
Limit development. Pinedale is a mess
already.
The Wildlife suffers especially in the fall
& winter also the Sage Grouse nature. Be sure
the Leases stick to the BLM rules & Regulations
we should protect our lands they are not
Making Any More. We are So Blessed to
Have Persons (you) Can Make all the
difference.

Sincerely
Gertrude M Smith
(Mrs Paul F)

1

LETTER 45

1-16-00
Casper Wy

Dear Mr McMahan:

I am writing to request your efforts to protect the Communities, wildlife, air and water of the Green River Basin by choosing the Resource Protection alternative developed by BLM and improving it to reduce road density, traffic, excessive use of groundwater and displacement of wildlife.

Thank you in advance for giving this matter your attention by applying your best problem solving skills

Betty A Young
475 College Drive #305
Casper, Wy 82601

1

LETTER 46

John Rust
9725 Oliver Avenue North
Brooklyn Park, MN 55444

January 16, 2000

Bill McMahan, Project manager
280 Highway 191 North
Rock Springs, WY 82901

Dear Mr. McMahan,

Please register these comments on the Draft Environmental Impact Statement for the proposed Pinedale Anticline Natural Gas Exploration and Development Project.

First a little about myself. My wife and I live in Brooklyn Park Minnesota, and we have two children. Over the past 20 years we have traveled frequently to the Pinedale area, and in particular to the Wind River Mountains. We have hiked, back packed, and camped, the Big Sandy area, the Green River Lakes area, and the Fremont Lakes area. I have hunted pronghorn antelope in Wyoming for three years. Our family enjoys the area, the scenic vistas, the wide open county, and the wildlife in the area in multiple ways. We have stayed in various hotels in Pinedale, including the ZZZ's Inn, eaten at the Wrangler Cafe, and at Stockman's Restaurant. We have eaten the giant ice-cream cones available in Farson. We have followed the Oregon Trail near South Pass. Consequently, I feel compelled, and a certain level of responsibility to comment on the affects of development in the area. I care what happens to this area.

Now for comments on the Draft Environmental Impact Statement. First, we need not exploit all oil and natural gas resources immediately. There is no dire need to extract everything now. These resources are more valuable when they are extracted as needed over decades, or centuries, rather than attempting to extract every possible cubic-foot of natural gas or barrel of oil at this time. Go slow, extract as needed, not just to turn a profit for the next business quarter. Oil and gas companies want to extract resources as fast as possible so as to churn huge profits as quickly as possible. Once this has been done, they would prefer to move an and abandon a site so that costs are minimized. The alternative is careful, environmentally responsible, extraction of resources, as needed, and done in a way to minimize the effects on air, water, and land quality, and to minimize disturbance to wildlife and the quality of the wide open spaces of the area.

In short, it is wise to choose the environmentally friendly alternative. The alternative that protects the quality of the air, water, land, and wildlife of the area is the preferred alternative. These resources should be extracted slowly and carefully over time, as needed, without disturbing the scenic or biological integrity of the area.

Respectfully,

John Rust

John Rust

1

LETTER 47

January 16, 2000

Diane Vitt
P.O. Box 826
Pinedale, Wy. 82941

Bill McMahan BLM
280 Hwy 191 N.
Rock Springs, Wy. 82901

Dear Mr. McMahan,

I have lived in Pinedale for the last twenty-five years and I am very appreciative of our clean air and water and the area wildlife. I am concerned that any of these resources could be threatened by the undertaking of this massive natural gas project. Let us not go trading off valuable resources.

I feel you as land managers have an obligation to enforce mitigation measures as this project continues. I encourage you to implement The Resource Protection Alternative. I believe this gas project can work without sacrificing other resources if the BLM sets reasonable and proper guidelines. 1

I realize there is a lot to be gained economically, but at what cost? A dollar does not have much of a conscience.

I hope you continue to monitor air and water quality, wildlife, and view sheds during the course of this project.

Respectfully,

Diane A. Vitt

Diane A. Vitt

LETTER 48

January 16, 2000

BLM
Attn: Bill McMahan
280 Hwy 191 N.
Rock Springs, WY 82901

Dear Mr. McMahan,

The drilling project near Pinedale will be by far the most environmentally destructive use of so called multiple use lands that we have seen to date. I have been to your meetings and see that there is no regard given to the destruction only how you and your cohorts roll over to industry. The gas up on the Mesa can probably be drilled for with limited damage but the BLM is not on the public's side only the gas companies. It is all to do with MONEY ie. leases, royalties, stock prices and gas that is in such an abundance now that storage reservoirs are full and no demand. Did you see the Salt Lake newspaper concerning Questar who is one of the drilling companies. This Pinedale thing is just a play to raise their stock price. Hell I understand they have known the gas was there for years. So you folks are going to let them destroy the environment, winter range and associated wildlife just so the rich folks in Salt Lake can get richer. Where does the destruction of what's left of our environment end. Most of us thought, obviously foolishly, that the BLM would look out for our land - guess not. I have heard it said that you can't do much about it because they own the leases, well someone should have a conscience and do something before the wildlife and lands we grew up with are gone and our kids just see road cut mountains to well pads and production equipment. You will probably get many letters from people wanting the drilling, just like the ones(form letters) you folk printed in the Wamsutter EIS. Most of these are from imports who work in the industry and only see their job and again money. I am sure they can find a job somewhere else in the world destroying the environment. Heck there is plenty of timber in the rainforests to cut down. I keep hearing the gas companies saying that it is barely economical and directional wells from one pad are uneconomic. Yes they may cost more(probably not as much more as they would like you to believe) but don't you think that sacrifices have to be made to preserve our environment and wildlife. Isn't making lots of money better than making lots and lots of money and destroying the environment and wildlife. If it can't be done and protect the environment and wildlife maybe it shouldn't be done at all. Multiple use does not mean destroying one non replaceable reserve to produce another. I think the BLM should do the following:

1. Discontinue new leasing and force companies to recomplete and/or recover more reserves from existing well bores rather than drill new wells. Use existing or develop technology to preserve the environment rather than destroy it. 1
2. Limit well pad density to 1 per square mile. Again make companies use existing and develop new technology to truly be a multiple use scenario. 2
3. Utilize existing technology to minimize destruction and make central production facilities work. 3
4. MAKE the operators who are getting rich from the destruction to HEAVILY fund wildlife monitoring studies even if these studies prove our point and expansion is stopped. 4
5. Do not allow multiple pipelines to the one location per square mile. 2
6. Limit compression horsepower to less than what you have in the EIS to protect the huge number of lakes in the Windrivers. Destroy these lakes and allow well pads all over along 191 north and you will destroy the tourist trade along with wildlife not even addressed in the EIS. 5

You have to do something NOW. Look at what you allowed to happen in the Moxa Arch. This area use to be full of wildlife. Have you been there recently? There are very few

antelope and nothing else. When is it going to be enough? When all the wildlife is gone and we have made someone in some other state rich. Don't let the gas companies buffalo you this can't be done, the way they want to do it, without total destruction. What makes gas engineers from a city an expert on wildlife? Because they see an antelope on a pipeline right of way they have all of a sudden, in their small mind, think that they have helped the species. It is the old "The checks in the mail" and "we will do what we can to preserve the environment" unless of course our 20% rate of return is threatened then to hell with the environment and wildlife - bring in the dozers! The gas companies use the adage that "you like your house warm don't you?". Yes I do but have YOU been to Green Peace's web site? Emissions from the existing known reserves of gas are adequate to destroy our planet. I don't think a stock price is worth destroying the environment and wildlife to produce a reserve we already have to much of.

Have a conscience and do the right thing!!

A concerned citizen.

LETTER 49

January 16, 2000

Bill McMahan
Pinedale Anticline Project Manager
Bureau of Land Management
280 Highway 191 North
Rock Springs, WY 82901

RE: PINEDALE ANTICLINE DRAFT E.I.S.

Dear Mr. McMahan and BLM,

Thank you for the opportunity to comment on the Pinedale Anticline Project and the opportunity to speak at the public comment meeting. The Draft EIS statement was very informative and thorough. I did not know many of the historical facts about the area and the extent of the technical data was presented so as to be up front and honest about the scope of the impact. When first learning about the proposed project over 1 ½ years ago, I was depressed and angry because I saw the impending destruction of one of the most pristine parts of America that until now, had been left unspoiled. While I am still saddened to see industrialized development come to Sublette County, I have come to understand its necessity in light of the country's dependance on fossil fuels and the clean burning nature of natural gas. While the development will create jobs for many people and much needed taxes for the state and county, it will cost me many dollars in lost property value, added expense to insure water purification of my well water, and valuable time in learning the issues involved and writing letters such as this. A financial price cannot be placed on the emotional stress and the potential loss of environmental quality that this development will inflict upon me.

I currently live within the city limits of Pinedale but will be moving to my new home within the New Fork Social Club in several months. As I stated in my testimony at the public meeting, my new home will be within the boundaries of the PAPA, it is part of the residential SRMZ, it is within a Class II VRM zone, the house itself is only 50 feet from the BLM boundary to the west and 1,200 feet from the New Fork wetlands, and part of the 21+ acres of my property is situated in the 100 year flood plain of the New Fork River. Unfortunately, like many other property owners here in Sublette County, I do not own the mineral rights on my property.

Because of my own selfish interests, I am very sad to see this wonderful part of the world industrialized and am very concerned that the development will not only forever change the face of the Pinedale area but could threaten the physical health of the Wind River Mountains. While I would like to recommend the "No Further Development" scenario, I realize that this is not a valid option. The next best scenario would be the "Resource Protection Alternative for All Lands and Minerals" within the PAPA regardless of mineral ownership. I also realize that this is not completely mitigated by the BLM alone. The operators would have to agree to this or the County and State Regulatory agencies would have to legislate this option into their rules and regulations. This alternative will be an uphill battle but I will do my part to contact both the Sublette County Commissioners and the Wyoming Oil and Gas Conservation Commission to express my

concerns. I have also tried to contact the EPA in Denver regarding the results of any ambient, time averaged air samples that may have been done in the area. The EPA official assigned to this area is currently out of town but I will continue to follow through on this issue.

As stated on page 1-6 of the EIS Draft, the National Environmental Policy Act requires all Federal agencies to:

- act as an environmental trustee for future generations;
- assure healthful, productive and aesthetically and culturally pleasing surroundings;
- attain the widest possible range of beneficial uses of the environment without degradation or risk to health and safety;
- preserve historic and cultural heritage and individual opportunity for choice;
- achieve a balance between population and resource use; and
- enhance the quality of renewable resources and encourage the recycling of depletable resources.

If the BLM keeps all of these NEPA directives at the forefront when making the very difficult decisions that will have to be made regarding the development of the Pinedale Anticline, then we the citizens of Pinedale and America will have little to fear. This area of Wyoming is unlike any other that has previously been developed for oil and gas production. The EIS Draft correctly states on page 4-1 that "This abundance of sensitive resources has not occurred in other areas of southwest Wyoming where BLM has prepared NEPA documents in the past." Indeed, the Wind River Mountains with its over 2,000 lakes and the seven largest glaciers in the continental United States is one of the most unique wilderness areas left in America. People travel from all over America to recreate in the mountains here. If they are damaged by acid rain and their view is spoiled by millions of pounds of hydrocarbons released into the air each year, will the BLM have acted in a responsible manner as a trustee for future generations? With this in mind, the number of wells drilled each year should be limited at first with the stipulation that the total number of wells allowed would depend on the monitored effects of the current wells on the environment. Water sampling in the Wind River Mountains and the local water tables would need to be an on going event and hydrocarbon emissions from the producing wells would need to be monitored. There should be no hurry to completely drain the gas underlying the Anticline. As a trustee for future generations, the BLM should keep some natural gas in reserve for a time when an alternative to fossil fuels is needed in the foreseeable future but the solution has yet to be developed.

1

2

Regarding the NEPA directive to "assure healthful, productive and aesthetically and culturally pleasing surroundings," the BLM has taken a positive step in limiting the development of wells to no closer than 1/4 mile from existing residences. This step, however, is inadequate. The EIS Draft states on page 4-72 that there is still an increased significant cancer risk from exposure to benzene even at 1,320 feet (1/4 mile) from the maximum exposure scenario. The most likely scenario assumes that people will move away after 9 years and that they will only be home 16 hours a day during those 9 years. Also, there is no consideration for the increased susceptibility

3

of immature bone marrow (children) to the effects of constant low levels of benzene. OSHA standards state that the airborne maximum time-weighted average exposure limit is 1 part per million for an 8-hour work day and the maximum short-term exposure is 5 ppm for any 15-minute period. Even looking at the "most likely scenario" for a family living near a well, what is the maximum time-weighted exposure limit in parts per million for a child in a 16-hour day? I have not been able to find the answer to that question while researching the toxicity of benzene. I do not believe that anyone currently has the answer. Until additional air sampling is done at various distances from existing wells, no wells closer than ½ mile from a residence should be allowed!

3

Furthermore, I do not believe the BLM will be able to assure "aesthetically and culturally pleasing surroundings" by allowing wells any closer than ½ mile from existing occupied residences. While the health and safety issue is the most important reason to keep wells further from existing houses, I do not consider a gas well and its associated tanks and frequent visits from service trucks to be particularly "aesthetically and culturally pleasing." The noise and night lights from the drilling operation, while temporary, will be very annoying for anyone trying to get a good nights sleep. The traffic and dust from trucks driving down the Mesa road was already disturbing this summer. Hopefully, the transportation committee will recommend that all heavy truck traffic come in from the south along the proposed Anticline crest road. In this way, the traffic can be kept out of the town of Pinedale and the residents would be more accepting of the development.

4

With regard to the NEPA directive to "attain the widest possible range of beneficial uses of the environment without degradation or risk to health and safety," the best way to do this would be to limit development to the Crest of the Anticline. This would primarily decrease the total number of wells and therefore the potential adverse effect on the Wind River Mountains and the water shed on the western slope of the Continental Divide. Also, traffic would then be concentrated on the Anticline crest road and the concerns of many of the Pinedale citizens would be allayed. From my understanding, the crest of the Anticline is where the best producing wells have been drilled so far. This alternative would also be more economically sound for the operators. This option also satisfies the NEPA directive to "achieve a balance between population and resource use." Where wells are drilled and pit liners are used, the operators should be obligated to remove the liners and any contaminated soil underneath and surrounding them. The thought of 700 to 900 pit liners being buried out on the Mesa and the chemicals in them being allowed to seep into the water table is absolutely disgusting. The BLM would be no less than negligent in its directive to insure "beneficial uses of the environment without degradation or risk to health and safety" if it allowed this to happen. Pit liner removal, soil reclamation, and soil testing by the operators after completion of the wells should be required by the BLM. Also, water table monitoring should be watched closely so that it, too, is not degraded.

5

6

7

One of the mitigation options mentioned in the EIS Draft, that I support, was for Pad drilling so that only 4 pads per section would be allowed. This would help in lessening the visual impact of seeing 16 individual wells per section. Also, it would be more economical for the operators to

install vapor recovery systems on a central pad servicing 4 wells. If wells closer than ½ mile from occupied residences are still to be allowed, then vapor recovery units should be mandated.

On page 4-72 of the EIS Draft, table 4-27 lists the annual emissions from the Anticline project in tons/year. By converting these figure to pounds, the amount of gases that will be released into this once pristine environment is absolutely staggering. There will be 3,335,200 lbs. of Hazardous Air Pollutants (480,400 lbs. of which will be benzene), 14,544,600 lbs. of Volatile Organic Compounds, 1,387,000 lbs. of Nitrous Oxide, 11,200 lbs. of Sulfur Dioxide, 2,288,800 lbs. of Carbon Monoxide, and 955,200 lbs. of particulate matter. The Nitrous Oxides and Sulfur Dioxide will combine with water vapor and be deposited into the lakes of the Wind River Mountains as acid rain. How much buffering capacity do those lakes possess? The HAPs, VOCs, and PM will cloud the air and change the viewshed qualities of the mountains. Volatile Gas Recovery systems on all wells may not be such a bad idea. It may cost the operators more to install, but what will be the cost of rebuilding the Wind River Mountains? Is it even possible? 8

According to NEPA's web site, "the old paradigm for environmental management was predict, mitigate, and implement. A new paradigm has emerged: predict, mitigate, implement, monitor, and adapt. The two latest threads - monitor and adapt - reflect the need to monitor the accuracy of predictions and allow enough flexibility in the process for mid-course corrections. A major difficulty with the traditional environmental impact analysis process is that it is a one-time event; i.e., results from intensive research, modeling, and other computations or expert opinions are analyzed, the analysis of potential environmental impacts is prepared, mitigation measures are identified, and a document is released for public review. Unfortunately, most often the process ends there. In such cases, adequate environmental protection depends solely on the accuracy of the predicted impacts and expected mitigation results. Changes in conditions - whether as a result of surprises from nature or human action - are not taken into account. Over the life of the project, these surprises can negate any environmental protections envisioned in the original analysis." The point is, considering the unique characteristics of this area and all of the natural resources such as the irreplaceable wilderness area, wildlife, and potential threats to water quality; monitoring and adaptability should be written into the final record of decision. The potential threat to human health must also be taken seriously and I will address that issue again in more detail. 9

Next, though, I would like to briefly address my concerns for wildlife. I do not believe that a 500 foot buffer around wetlands areas is an adequate safety zone. Requiring open pits to be netted will certainly help prevent toxic deaths, but the continued release of VOCs and HAPs from the producing wells could be even more of a threat to migratory birds than it is to humans. Remember, miners used to carry canaries in cages into the mines with them. When the canaries dropped dead, that was an early warning to them to leave the mines before they too dropped dead. Our feathered friends are much more susceptible to toxic gases and environmental pollution than we humans are. A quarter to a half mile buffer from wetlands would be a more reasonable safety buffer if you want to be sure that this project does not adversely effect the valuable wetlands along the Green and New Fork Rivers. I am also concerned that the development on the Mesa will effect the Deer and Antelope herds that live and migrate through 10

that area. Hunting restrictions should be established on the Mesa to either close the area to hunting or at the minimum establish quotas and limit hunting there to hunters who have attended and passed a hunter safety course. A stray bullet into a condensate holding tank or worse yet an above ground pipeline could be disastrous. While this is beyond the scope of the BLM's jurisdiction, recommendations could be made to the Wyoming Game & Fish depending on the outcome of the Record of Decision. Once the ROD has been issued, I will contact them with my concerns. 11

Finally, I would like to inform you of what I am in the process of doing to protect the health and safety of the residents of Pinedale if not the State of Wyoming. As a physician who also holds an undergraduate degree with honors in Chemistry from the University of Illinois, I am particularly concerned about the risk of exposure to benzene. Benzene is recognized as a very potent carcinogen. Much research has been performed on rats, and human exposures and illnesses related to benzene are well documented. Your well inspectors are now required to carry respirators when inspecting wells so I am sure that you are also aware of the dangers. Benzene attacks human bone marrow like few other chemicals. There is a case report that I recently reviewed from an Industrial Hospital in Korea where they linked a case of aplastic anemia to a worker who was exposed to an average of only 0.25 parts per million of benzene during 8-hour shifts five days per week. Benzene has not only been linked to aplastic anemia which is a suppression of the bone marrow, but also to leukemia which is cancer of the bone marrow.

Last week I contacted the Wyoming Oil & Gas Conservation Commission to see what I would have to do to change the 350 foot rule (Chapter 3; Section 22 (b) of the Commissions Rules). I was informed that the rule already includes a provision that if the Supervisor deems necessary, the 350 foot restriction could be expanded or exceptions could be made to shorten the distance. When asked how they came up with 350 feet as a safe distance, the person I was talking to could only say that "the rule has been around for a long time". This same person also said that if I could provide any scientific data to show that this was an inadequate distance, they would be very interested. It seems that Air Sciences, Inc. of Lakewood, Colorado, the contractor who provided the air monitoring information in the Technical Report that supplemented the EIS Draft, has already provided the information that I need. Please refer to Figure C7 in that report that shows the maximum scenario exposure to benzene exceeding threshold values for additional risk to cancer. Again, there is no information that I can find that states what an acceptable level of airborne benzene in parts per million is when exposed 24 hours a day, 7 days a week. In addition, I have tried contacting the EPA in Denver but was unsuccessful. I will continue to solicit their help in randomly sampling air around producing wells at various distances to see what the concentrations of benzene are at the 350 foot, 1,320 foot, and 2,640 foot distances.

I have also been in contact with the National Institute of Environmental Health Sciences, a division of the National Institute of Health. They have done research in the past on human exposure to benzene and its effects on human bone marrow. They are currently considering the proposal that I have made to them to study residents who are less than a quarter of a mile from a producing gas well. They have not made a formal response as of yet nor have they sent me an

application for a study grant here in Wyoming. I am not sure if this is a worthwhile research project yet since I do not know the exact number of wells currently producing here in Wyoming that would be eligible to be included in this study. I have yet to contact the Sublette County Commissioners to request a temporary moratorium of allowing wells to be placed any closer than a half mile from occupied residences until further studies can be completed. I have little hope that they will be willing to get involved. I predict that their answer will be "hire a good attorney".

Thank you again for the opportunity to comment on this most important EIS Draft statement. The future of this most unique area of the United States, if not the world, lies in the balance. Please give serious consideration to the recommendations that I have included in this letter. Also, please do not hesitate to contact me if you have any questions about the information that I have provided herein. I will be more than happy to keep you posted on the results of my interactions with other local, state, and federal agencies if you are interested.

Sincerely,

Michael J. Kramer

Michael J. Kramer, MD, FAAEM
P.O. Box 682
(482 Shanley)
Pinedale, WY 82941

Phone: 307-367-2394

LETTER 50

1/17/2000
To: Bill McMahan/RSFO/WY/BLM/DOI@BLM
cc:
Subject: Drilling at Pinedale

I am writing as a concerned citizen, relative to the proposed drilling near Pinedale. It is my understanding that your are considering the drilling of up to 900 wells in this area that we (as residents of the area) consider pristine and unspoiled; as well as its importance to migrating and resident wildlife populations. I am very concerned about the level of impact this will have on both the wildife as well as the long-term impacts which will affect both my children and their children.

Boom and bust has been the way of Wyoming for many years, but I don't feel it needs to be - we need very good planning to acquire this gas over the long term; not as quick as we can get it. It is quite obvioius to me that our past level of planning and development has been too quick to adequately consider all impacts and I don't feel we have the latitude to continue the development at the past rates; at least if we are going to protect our local heritage, wildlife populations and current way of life. These need to be considations in your long-term planning needs; not just the financial benefits. There is no doubt in anyones' mind that we need some growth; but when you compare rapid boom-and-bust growth to steady growth over time; which still gets out the needed resources; it is a matter of local pride and caring in our present way of life that should be driving the development. I think there are certain things that are imperative in this planning including - scale back the develop in order to mitigate the effects; both on wildlife as well as our way of life. 1

- discontinue new leasing and limit well pad density to no more than 1 per square mile. 2
- ensure that production facilities be centralized and any efforts at a greater number of wells/section than above be restricted to lateral drilling or drilling more than one hole from the same pad. 3
- Adhere to winter and other related wildife stipulations designed to protect these animals during their important seasons. Also, current information is not adquate to ensure that we know what we have in the way of critical habitat - sage grouse is a prime example; especially winter sage grouse habitat. 4 5 6
- Ensure that adquate mitigation is in place for any and all wildlife habitat effects. Additional studies as well as on-the-ground projects need to be in place prior to any further development. 7

The above should be followed whether the develoment is on private or public lands - a watershed/landscape approach needs to be taken in the planning efforts to determine overall effects. 8 9

Thank you for the opportunity to comment - I hope that you realize how important this area and its wildlife and wild places are, both locally as well as nationally.

Dan Stroud
- att1.htm

LETTER 51

1/18/2000
To: Bill McMahan/RSFO/WY/BLM/DOI@BLM
cc:
Subject: Gas wells in Pinedale region

Dear Bill,

I wanted to write a note about the proposal to drill more gas wells near Pinedale. Being that my brother lives in Pinedale I visit there and see this project from two sides. The additional jobs would benefit the area, but the potential for damage scares me. I hope your organization will see to it that the wells are distributed out to the point that they do not harm the deer, antelope, grouse, and other animals. Some winter forage and resting areas need to be protected and I hope that you will see to it that these steps are taken before any damage is done. 1

Thank You

Joe Winkler

LETTER 52

1/18/2000
To: Bill McMahan/RSFO/WY/BLM/DOI@BLM
cc:
Subject: Dominant use of Public Lands

How can the public lands of Wyoming stand this assault of natural gas wells in the Pinedale area? Surely the term "natural" doesn't count in the gas well completion process as being natural in the term of nature? The Sage Hens, Antelope, Elk, Deer and a multitude of other life forms will have a hard time accepting the gas wells on natural terms.

900 gas wells are too many! 450 gas wells are too many! There is a glut of natural gas at the present time, where is the overwhelming need to degrade more of an environment that is already under assault from grazing as well as oil and mineral extractive interests.

If any wells are allowed they should mitigate harmful effects to the land and wildlife 150 % to give the harmed wildlife and land not only a chance to recover but to ensure that recovery and even increase the land and wildlife values. ONCE THE OIL, GAS, AND MINERALS ARE GONE, THESE EXTRACTIVE INDUSTRIES WILL LEAVE THE MESS TO THE RESIDENTS OF THE STATE TO CLEAN UP! 1

At the very least, put the production facilities in a central location, require zero emissions, and spread the wells to at least one per square mile. 2 3 4

The REAL residents of Wyoming are not in favor of this form of desecration of public lands to allow international interests to make more money for their out of state and sometimes out of country stockholders.

Dschweig - att1.htm

LETTER 53

Jan. 18, 2000

Mr. Bill McMahn, Mgr.
BLM, 280 Hiway 191 North
Rock Springs, Wy. 82901

Dear Mr. McMahn

As a member of Wyo. Wildlife Assn. I have been encouraged to write you and join in the protest of the large number of new natural gas wells that are either in production or projected and proposed in your area in the near future. I think that it is imperative that the development of these wells be scaled back and their development spread over a longer period of time. Such a movement would be better economically for not only that area but for the industry as well. The wildlife in the area would not suffer the negative impacts resulting from rapid development also.

Wyo. in general would be better off and this would also lessen the negative impacts resulting from the over production of natural gas in the natural gas industry. A stable price range would result and a price war avoided. For example the over production of coal in the Powder River Basin has resulted in prices nearly as low as prices were in the 1930's. Prices are so low and the competion so keen that the coal mining company's are pleading that they are unable to pay an increase in severance taxes that the state needs so badly at this time. 1

5-138

I wrote the "Letters to the Editor" editor of the Rock Springs "Miner" newspaper about 18 months ago expressing my concern of the unrestricted limits on the drilling of gas wells in the Southwest Wyo. area. They declined to publish this letter without comment as to why.

With this letter, I am urging you to scale back the BLM's present project to develop the proven natural gas reserves in your area of Wyo. The negative impacts on environmental issues in the area could be avoided or decreased without serious economic impact to the industry.

Mr. McMahn, I think I wrote you a letter in about July or August of 1998 relating very closely to the same topic as this letter covers.

Sincerely yours

LeRoy Lewis
526 So. 4th. St.
Douglas, Wyo. 82633

LETTER 54

January 18, 2000

United States Bureau of Land Management
Attn: Bill McMahan, Project Manager
280 Highway 191 North
Rock Springs, WY 82901

Dear Sir

I am writing to express my concern about the proposed gas well development in south west Wyoming. My concern lies in the mass effect these wells and their associates will have on air quality, water quality, recreation and our wildlife. My home is in Rawlins and I am a member of the Wyoming Governor's Non Point Source Task Force representing the Recreation and Tourism Industries. Furthermore, I am also a Supervisor on the Saratoga-Encampment-Rawlins Conservation District board. In that light, I would be remiss in my civic duty not to speak out against this proposed development.

First off, why so many new wells so quickly in such an environmentally sensitive area - a high altitude desert? The way I understand it there are applications for some 5,000 wells to be developed in the next 10 years, with a distinct possibility of over 10,000 wells in the next 15 years. What ever happened to the ideal of long term sustainable economy; that is so needed in Wyoming. Discontinue new leasing and lapse expiring leases in the Green River Basin for sustainability. 1

Such large scale development would mar the vast beauty of the area, forever transforming this sprawling natural landscape to a grid of access roads (which each of these well sites will have), unsightly wells and their related features. Please require that pad drilling be used and production facilities be centralized to minimize the cumulative effects of industrialization. How will this increased human activity impact the largest antelope herd in the country, the desert elk, the raptors, the game birds (and potential listing of the sage grouse as threatened)? In the BLM's own "Draft Environmental Impact Statement on the Pinedale Anticline Oil and Gas Exploration and Development Project" it is noted that the project will have significant impacts on air and water quality and wildlife populations. Ponder the legacy we leave our children. 2

Emissions from well activity, such as Nitrogen, Sulphur, Volatile Organic Compounds and dust, will most assuredly have repercussions to water and air quality. This particulate will be carried off in our Wyoming winds, join with water droplets, then precipitate out to impair watersheds and our seemingly endless views of Wyoming. It is imperative we protect our Class I Airsheds in the area. The BLM should require that operators use electric compression to minimize impacts. No pollution limits should be allowed to be violated. Enforce state and federal air quality stringently to reduce emissions and road dust. Consideration must be given to adjacent lands. 3 4

I propose that an overall cumulative effect study be conducted on the compounded impact of this well development and other projects existing or proposed. There can not be a logical determination based on the impact of one well site without looking at the total consequence. 5

Moreover, I submit that a decision for permitting be delayed until contradictory analysis of impacts are resolved. At the minimum we should slow the process, cautiously proceed so the impact can be objectively quantified as the (significantly downsized) development progresses. | 6

Finally, I would like the economic repercussions considered. Let me explain that although I am a strong supporter of Multiple Use Sustained Yield management of our public lands, I am irritated with the fact that Wyoming is used as a colony by the extractive mineral industry. If the past is an indicator, the industry will give no thought of the culture it affects. With out a doubt, this could be a large boost to the economy of South Central Wyoming; but at what cost. Have we learned nothing from the Boom - Bust cycle of the past. Rawlins is only now recovering from the last boom. Our current residents are those interested in building community not the transients money chasers we all suffered in the early eighties. I for one do not want to return to those days.

I would urge you to consider the health of the resource and choose the Resource Protection Alternative. Limit the density of wells and require "Development Corridors" to reduce and centralize impacts. | 7 | 8

Thank you for your consideration. If I can clarify my thoughts please call 328-4512, I look forward to speaking with you.

Sincerely,

Daniel J. Mika
315 Seventh St.
Rawlins, Wyoming 82301

LETTER 55

FREDERICK J. ARAAS, M.D.
POST OFFICE BOX 643
SHERIDAN, WYOMING 82801-0643

Jan. 18, 2000

Greetings, Mr. McMahan,

I am writing to you the proposed 999 new natural gas wells to be drilled near Pinedale in what is described as a world class wildlife and scenic area.

Though I appreciate the need for expanded job opportunity for Wyoming citizens, this project appears to be like the trading of one very valuable self-perpetuating resource for one of immediate but limited value. 1

Thus I believe it is imperative to give due consideration to all the environmental factors involved. Most importantly the restriction of industrial and vehicle activities during wintering periods for the local wildlife is imperative. Otherwise, this important habitat may be lost forever.

Sincerely,

Fred J. Araas

LETTER 56

1/18/2000
Please respond to "john s. crosby" <y2kadv@gnt.net>

To: Bill McMahan/RSFO/WY/BLM/DOI@BLM
cc: ljdorsey@aol.com
Subject: Pinedale Gas Wells

I understand a large natural gas project is in the works for the Pinedale area in the next few years. In my view this is a terrible idea. The area around Pinedale is one of the most pristine wildlife areas in this country. During the wintering periods for wildlife the area should be restricted and we need to monitor the impact of leasing the land for natural gas exploration all year. 1

Sincerely,
John S. Crosby, Lt.. General, US Army, Retired

LETTER 57

1/18/2000
To: Bill McMahan/RSFO/WY/BLM/DOI@BLM
cc:
Subject:

Mr.Bill McMahan.

My son and I have been applying for deer tags in Wyoming since 1990. We have been successful about seven times. We have hunted in the area where you are proposing to up to 900 new gas wells. Why are so many needed? It seems as though that many wells will destroy so much great land. Will you be monitoring the area to see how much damage it has or will have on the wildlife in the area. We drive about 850 miles each way to hunt in the area. It is not that important to us if we get a buck or not, but just to see all of the wildlife we see. Is it possible to cut back on the number of wells that can be sunk to maybe one a mile or less. 1 2 3

We hunted up near the gas works some 30 miles from Evanston in 1998 and I am afraid the area around Pinedale will start to look like we hunted near. It is not a pretty sight. I hope my little input will help to protect our wildlife. I have been going to the mountains in California since 1940. I truly love my wildlife. Thank you for hearing my side of the debate.

Vernon L. Minenna

LETTER 58

1/18/2000
To: Bill McMahan/RSFO/WY/BLM/DOI@BLM
cc:
Subject: Pinedale, Wyoming

Dear Mr. McMahon,

Although live in North Carolina, I have often been in the Pinedale area over the last thirty years. We have been there for the scenery, for rock-hunting, and on the way to and from the Tetons. It is such a beautiful area, and we have often on our trips met others out in the area also enjoying it. Please restrain the oil development so that people will continue to come to that part of Wyoming to enjoy the PUBLIC land that is supposed to be theirs. 1

Sincerely yours, Gerhard Weinberg

5-141

LETTER 59

Gentlemen

In regards to your drilling program in the Jonah Field. I am writing to say that I have to vote for the drilling Program. The reason I say that I have to is because my family and I live in Sublette county and the oil field is the only Job with half decent wages! One thing that I do not agree with is the way that Amoco, Westcen Gas, and McMurray Oil treat the people in Sublette County as second class people!! If my Lively hood did not depend on drilling I would have to protest the program, but for now I will have to give my support for it. Another thing you people (BLM) are doing a good job of standing up 1

to Enviromentalist And Game and fish for utilizing the Land peopealy and putting use to the land, "Thanks"

I my veiw its crap that Tree huggers from Jackson, Idaho New York etc. try to shut down our way of living for those of us that stuggle to live in the State of Wyoming.

In my exspeeriance as a hunter and watcher of wild life is that the worst enemy to Wild Life is the Game & fish and their mist managment. Examples are the over kill in 85-86 which they (Game & fish) called winter kill, and to this day you can hunt grouse up to 1½ months. The Oil and Gas, Ranchers and Blm have done more for the Wild Life than people give them credit for So once again I must say I have to say I am for the drilling. Signed Greg Eiden Sr.

1

LETTER 60

5915 W 59 ST
CHICAGO, ILL 60638

THE 1872 ENERGY AND MINEING ACT THIS IS GOOD FOR BIG OIL BUSINESS AND GAS. EVEN COAL MINEING BUSINESS

THE BLM LANDS OF WYOMING. HAS NO LAND SAVED, NO WILDERNESS OR DESERT PARKS

1

3000 TO 5000 TO 15000 OIL GAS WELLES THIS IS WAY TO HIGH. THIS WILL HURT GRASS LAND, GRAZING, RIVERS LAKES, STREAMS AND WET LAND AND WILD LIFE. THIS HAS TO BE CUT BY 60 PERCENT IN 15 YEARS

COAL MINEING, STRIP MINEING THIS IS WAY TO HIGH IF YOU GET MORE AND MORE WYOMING WILL LOOK LIKE A STRIP MINE

LETTER 61

BLM CAN MAKE MONEY ON
(1) GRAZING (2) OPEN RANGE, (3)
PARKS (4) WILDERNESS, (5) HUNTING
(6) FISHING (7) DESERT REFUGES AND
DESERT OPEN RANGE (8) BLM FOREST

THE KILLER PECKER THE LARGEST
IN THE USA. AND TWO IN THE
WOURLD, BOAR'S TUSK, STEAM BOAT MTS
RED DESERT FLAT, RED DESERT BASIN
GREAT DIVIDE CHAIN LAKES FLAT
TO THE NORTH GREEN MTS, SOUTH
PASS CITY

Please send me a
News Paper.
A Map
3 White CAN I DO
4 A. RED DESERT BOOKLITE

Larry DiBritto

5-143

1

1706 Meadowlark Lane
Sheridan, WY 82801
January 19, 2000

Bill McMahan, Project Manager
BLM Oil & Gas Leasing
280 Highway 191 North
Rock Springs, WY 82901

Dear Mr. McMahan:

Having seen the new coalbed methane wells east of the Big Horns, I am very concerned about any new wells being developed on our public lands. This is a tremendous destruction of wildlife habitat, water quality, and adjacent landowner rights! I realize that we all use directly or indirectly lots of natural gas. However, there must be some cautions to be observed or our Wyoming way-of-life will soon be gone.

Please require these companies to "tip-toe" as much as possible on our fragile lands. Pipelines, storage and processing facilities, and roads should be coordinated to occupy the least amount of surface. It seems like one pad, with its attendant road and pipeline, would be adequate for a section of land (one square mile). Roads must have proper drainage built in during construction and ripped and seeded with native species when abandoned. Pipelines must be buried and seeded over. Pumps, storage tanks, and processing facilities must be removed and sites reseeded when done. These access and production jobs are now being accomplished by simply dozing through the sage and grasslands in Northeast Wyoming. All this must require bonding for the full anticipated costs of repairs to our land. 1 2 3

Of particular concern to me is the loss of sagebrush. We have had enough spraying and burning of sage for agriculture to damage antelope and deer winter range and habitat for sage grouse. The sage I have studies has harbored millions of song birds like lark buntings, savannah sparrows, bobolinks, etc. as well as the more obvious raptors. Please require regeneration of sagebrush in all permits. Use by permittees and by the public needs to be restricted during critical winter periods, spring mating and nesting periods. 4 5

Lastly, it would be a good promotion of proper land management if you would promote these practices on private lands as well as public lands. Show your leadership in the professions of land management! 6

Thank you for the opportunity to comment on the management of my land.

Sincerely,

Robert E. Damson

LETTER 62

John G. Raffensperger, M.D.
1902 Orchard
Chicago, Illinois 60614

(312) 951-8329

January 19, 2000

Bill McMahan, Manager
BLM 280 Hwy 191 N.
Rock Springs, WY 82901

Dear Mr. McMahan,

Is the BLM really proposing to place natural gas wells on public property near Pinedale?

I hope this is just a rumor. This is a lovely, scenic area good for hunting, watching birds and a place for us city folks to get outdoors. There aren't many places left in the world where we human beings can get out and have a chance to see wild game or to have an opportunity to hunt. Perhaps, out there in the west, you take all that space for granted and assume that it will never end. Unfortunately, activity such as mining, grazing, real estate development is eating up the land, even out west.

Please say it isn't true. Don't let more of the west become another industrial slum. Don't build roads, dumps, wells and pipelines. Leave it be!

The solution to our energy problems is conservation. The message should be to use less energy, not to despoil more of our land, especially our public land for gas and oil.

1

Sincerely,

John Raffensperger, MD

LETTER 63

BIG 3 SUPPLY CENTER

4509 Crystal
Cheyenne, Wy.
82001.

1/19/00

Mr. Bill McMahan
BLM, 280 Hwy. 191 N.
Rock Springs, Wy. 82901

Mr. McMahan

I have been hearing about the natural gas wells that are to be drilled in the Pinedale area. I lived in Cody several years ago and traveled the Pinedale area at that time. I also lived in Rock Springs so I am well accuainted with that area.

I have heard about new roads, well pads, waste pits and pipe lines being installed in this area. This project should not be so large as to ruin the area for wildlife animals and birds and the likes. It would also ruin scenic vview of the area.

To let the oil and gas companies destroy our land is not the wish of the Wyoming citizens.

There should be a limit on the number of wells and other buildings that can be installed, so the area won't be destroyed.

There is beautiful territory out there, I hope you will listen to the citizens of our state about conserving our wildlife and scenic areas. The wildlife scenic areas and clean air are the reason we live in Wyoming. If all we wanted was to make money we would leave Wyoming.

1

Thanks,
Keith R. Neville

BIG 3 SUPPLY CO. OF WYOMING
1501 Bent Avenue • Cheyenne, WY 82001 • 307 634-3100 • Fax 307 634-0125

LETTER 64

1-19-2000

Bill McMahan:

I wanted to write to you and let you know my feelings on the proposed development in the Pinedale area.

There is no doubt that this project will go forward, so one can only hope that it might be regulated in such a way as to do the least amount of devastation to the area.

It wouldn't be too bad of an idea to have just a small portion of this project started and well under way for a period of time in order to do a fare analysis of the impact that the project is going to have on the wild life and the land. 1

As far as I know the need for the gas isn't, by any means, critical to our existence in the immediate future. I believe there's a sufficient amount of gas for all at this point in time. I'm not sure why the race is on to try and deplete all of our natural resources as if there's no tomorrow. I hope there will be some well thought out decisions concerning the future of this area. The consequences of a hasty decision in this matter will undoubtedly be too damaging to ever recover.

Thank you for your time and your responsible consideration on this matter.

Tim Sullivan
17 Twin Lakes Ln
Buffalo, Wy
82834

LETTER 65

1/19/2000
To: Bill McMahan/RSFO/WY/BLM/DOI@BLM
cc:
Subject: Request to Limit Gas Development on BLM Lands Near Pinedale

Mr. McMahon,

Obviously as a member of this society I use fuels. But I am reducing my addiction and encourage others to do the same. The trade-off is well worth being able to save BLM lands for the wildlife and the land's intrinsic beauty.

My wife and I have hacked Peregrine Falcons along the Green River north of Pinedale. We have worked on Sage Grouse with the Colorado Division of Wildlife. I am a Professional Engineer working for a major corporation. So, I am well versed in both business and environmental issues. And I strongly encourage you and your decision making peers to come down strongly on the side of wildlife and leaving things as they were on BLM lands proposed for leasing of natural gas. It has taken hundreds of years for the wildlife and land to evolve to it's current status and natural productiveness. Gas development will ruin the area within a year and our society will squander the gas within a few years and the public lands will never be what they once were. We cannot put back all the pieces of the puzzle. 1

I request you save all possible BLM lands in their undeveloped state for our children's grandchildren. Implement strong requirements to mitigate and minimize wildlife disruption on those lands you feel forced to lease for gas production. The nation of twice the number of citizens we have now will, in the future, thank you for your wisdom and positive actions in defense of wildlife and public lands.

Sincerely, Gary G. Ruhser, Holmen, Wisconsin

LETTER 66

1/19/2000
To: Bill McMahan/RSFO/WY/BLM/DOI@BLM
cc:
Subject: Natural resource utilization

Dear Bill:

It has been brought to our attention that the wildlife federation is campaigning to put a halt to gas exploitation in the area that you are project manager. We must continue to allow for our natural resources to be utilized, without fear of persecution. We also must remember that industry is the backbone of this country.

Montanans for Multiple Use, would like you to know that we support the true multiple use management that is proposed for your area. There can truly be a balance between recreation, and industry. 1

Stick to your guns, and move forward with our use of natural resources. If you would like to contact me, feel free to do so. My email is thornyacr@aol.com

Please keep me advised on the status of this issue.

ThornyAcr

LETTER 67

SHERYL LEHMAN
5 RUBY RD
LANDER, WY 82520
(307) 332-6332

BILL MCMAHAN
BLM
320 HWY 171 N
RIVER SPRINGS, WY 82101

DEAR BILL,

WYOMING'S PRISTINE, WILDLIFE FILLED, PUBLIC LANDS ARE SLOWLY BEING STOLEN AWAY FROM EACH OF US. THE RESIDENTS OF THIS GREAT STATE OF WYOMING. THE DECISIONS BEING MADE BY ALL OF OUR STATE OFFICIALS AND REPRESENTATIVES ARE HAVING A NEGATIVE IMPACT ON THE FUTURE LEGACY OF THE STATE.

THE LATEST BLM DECISION TO ALLOW 900 NEW NATURAL GAS WELLS TO BE DRILLED NEAR PINEDALE COULD HAVE DISASTROUS RESULTS ON OUR PUBLIC LANDS. WE NEED TO MINIMIZE THE NEGATIVE IMPACTS THAT THIS PROJECT WILL HAVE ON OUR LANDS AND OUR WILDLIFE BY REQUIRING PRODUCTION FACILITIES TO BE CENTRALIZED AND BY STOPPING NOW LEASING, AND ALSO BY LIMITING WELL PAD DENSITY TO ONE PER SQUARE MILE. (OVER) 1

WE ALSO NEED INDUSTRIAL OPERATORS TO FUND WILDLIFE MONITORING STUDIES FOR THE LIFE OF THE PROJECT ALONG WITH RESTRICTING INDUSTRIAL AND VEHICLE ACTIVITIES DURING CRITICAL WINTERING AREAS FOR DEER, ANTELOPE AND ALSO DURING SPRING NESTING FOR SAGE GROUSE AND BIRDS OF PREY. 1

WE ALSO REQUEST THAT INDUSTRY OPERATORS USE THE SAME PROTECTIONS ON THE PRIVATE LAND LEASES AS ON PUBLIC LANDS.

THIS IS A PLEADING REQUEST TO THE BLM TO PLEASE MONITOR THIS CLOSELY, AS OUR WORLD CLASS WILDLIFE AND SCENIC LAND IS BEING TAKEN AWAY FROM ALL OF US, ACRE BY ACRE. OUR PUBLIC LANDS AND OUR VAST WILDLIFE ARE A LASTING LEGACY WHICH, IF DESTROYED OR ALLOWED TO BE "SOLD OUT" TO PRIVATE INDUSTRY, WILL NEVER BE RECLAIMED. PLEASE USE YOUR POWER AS BLM REPRESENTATIVES TO SEE THAT OUR PUBLIC LANDS RETAIN THE WONDERFUL VALUES THAT THEY HAVE ALWAYS HAD. THANK YOU

SINCERELY,

SHERYL G. LEHMAN

LETTER 68

1/21/2000
To: Bill McMahan/RSFO/WY/BLM/DOI@BLM
cc: LJDorsey@aol.com
Subject: Pinedale gas well project

Although a resident of Texas, I often travel to Wyoming for the opportunity to hunt and fish. Unfortunately, many of our states have been poorly managed over the years when it comes to extracting our natural resources. The result is lost or damaged habitat that can never be recovered. Once gone, we cannot recreate nature.

As a 40 year veteran of the petroleum and chemical industry (management) and an active outdoors man, I have seen how industry and uncaring people can damage or destroy an area if not properly controlled. To some extent, we are all controlled from the time we are born. This is why we are civilized. So setting controls and conditions is common for industry, a cost of doing business. Other than can't do laws, there are many different types of controls on industry which set the boundaries under which we operate. These basically come down to the cost to do business. If the return does not justify the cost we don't do it but wait until technology and/or the market makes it a viable project. Nothing wrong with a decision not to go forward; however, all bottom line managers will push for what ever it takes to justify a project short of violating existing laws, codes, restrictions, etc. There is the good citizen or environmentally conscious way to explore/extract and the wrong or reckless way.

Boundaries and/or parameters hopefully have been set to protect our environment and provide for restoration to as close to the original condition as possible. The cost to operate will determine if the project goes forward today or sometime in the future as we learn better ways to do it. I can't under emphasize returning the environment to it's original condition when the project is over, or the remaining gas is to expense to extract or for what ever other dozen reasons a company decides to close up shop. A trip through Texas will illustrate how sites turn into equipment grave yards, dump sites for contaminated water, abandoned barrels, etc., when projects end. A legacy of the early and not so long ago days of oil and gas exploration. I would hope that provisions have been made up front to address not only how to protect the environment today, but ensure it is returned to a useful condition in the future. It is easy to play a shell game with small companies or subsidiaries of subsidiaries to shutdown operations, bankrupt them, or put them into a no asset basis. Restoration funds should be collected up front and put into a trust to ensure it will be done. Additional provisions should be made to add to the funds if the project expands so that the survival of the drilling company is independent of protecting our environment. We are all stakeholders in our public lands and all have a right to their use and protection. They should not be dominated by any individual, group, company, or industry but provide multiple use for all. Most of all, there should be no justification to do harm to our public lands. 1

Peter Lindabery
818 E. Woodglen Dr.
Lewisville, TX 75077

LETTER 69

January 22, 2000

Bill McMahan
Pinedale Anticline Project Manager
Bureau of Land Management
280 Highway 191 North
Rock Springs, Wyoming 82901

Dear Mr. McMahan,

I would like to comment on the Pinedale Anticline Oil and Gas Exploration and Development Project Draft Environmental Impact Statement. Overall I am very concerned of the impact this project will have on wildlife habitat, air quality, and water quality. The oil and gas have been here for a long time and will continue to be available. There should be no rush to develop this project and sacrifice many of our priceless resources. Pinedale is a beautiful place and very unique and I would like to see it remain this way.

I believe it would be wise to go slow on this development. I endorse the Resource Management Alternative and would like to see the total number of wells decreased to 300 and then reassess the impacts of these wells on wildlife, air quality, and water quality.

I am concerned with the well density, as it is stated in the DEIS that 4 wells per section will clearly impact mule dear. I would like to see the well density decreased to 2 wells per section to lessen the impact on wildlife habitat 1

Although I do not own land in the project area, I believe it only fair that the same standards that are decided upon regarding BLM land be applied to private land as well. Along the same line. I think the distance from which wells are placed near homes should be increased. 2 3

Thank you for your time,

Todd Perry
PO Box 1886
Pinedale, Wyoming 82941

LETTER 70

RR1, Box 44
Wood Lake, MN 56297
January 22, 2000

Bill Mc Mahan
BLM
280 Highway 191 North
Rock Springs, Wyoming 82901

Dear Mr. Mc Mahan:

Just a short note to express my deep concerns about the ongoing rush of BLM to destroy more of our public lands. My question is, how can the supposed stewards of our public lands allow such desecration to occur in order to further pad the deep pockets of the energy companies. The gas from everyone of the 900 proposed wells could easily be made up by increased conservation in our homes.

Responsibility for the destruction of these beautiful public lands lies with you and your cohorts in BLM. You can pursue the easy route of running with the powerful energy industry or the right, less and difficult path of protecting these public lands for our children and future generations to enjoy as God granted us the opportunity. 1

Decisions by spineless public land managers have too long allowed the steady destruction of our public lands for their own personal gains in the form of promotions and more profitable monthly checks and retirement. Public land managers must start basing their decisions on what is best for the long term future of our society, not their own personal preferred level of comfort.

Sincerely,
Richard Kroger

5-149

LETTER 71

1/23/00
To: Bill McMahan/RSFO/WY/BLM/DOI@BLM
cc: tom_fry@blm.gov
Subject: Green River Basin- Oil and Gas development

Dear Sir: I realize that there are many forces in Wyoming pushing for a full scale development in this region driven by economic needs but I would like to see you stand on the ground protecting those things which have no voice. Clean air , fresh water, and wildlife populations which will be adversely affected by an increase of human use of this area. Scale back the size of this proposed development and extend it over a longer period of time to allow the region time to absorb the development in a pattern of sustained growth and allow you time to observe any adverse changes and put in mitigating programs before the region suffers any long term ill effects. We do not have to create another superfund site requiring cleanup 50 years from now. When its possible with all parties working together we can provide additional protection by choosing your Resource Protection Alternative. We have only one planet, its a finite resource and when its gone its gone. And then as an aside think about why here in Wyoming we can still drill a well and drink the water whereas in most areas of this country they buy their water in bottles and use their tap water for cleaning purposes only. 1

Sincerely:
William Guheen
Jackson, Wy.

LETTER 72

1/23/00
To: Bill McMahan/RSFO/WY/BLM/DOI@BLM
cc:
Subject: Pinedale Leasing

Dear MR.. McMahan

The Pinedale area that is now being considered for extensive natural gas exploration and hopefully production is one of the few areas in our country that has been to retain its natural beauty. I was born in Laramie some 73 years ago and I have seen the changes that have occurred in our state over the intervening years resulting from various land management practices, some good and some bad. We have both seen the changes resulting from oil and gas exploration. They never improve the natural state, but this should not be used as a reason to prohibit all commercial uses of the land. However the use permitted should not destroy the possibility of all other uses. 1

It is my opinion that the proposed density of drilling is excessive and would virtually prevent all other uses of the land involved. I am not opposed to the development, but I am opposed to the density now projected.

Thank you. Willis J Jensen
- att1.htm

LETTER 73

1/23/00
To: Bill McMahan/RSFO/WY/BLM/DOI@BLM
cc:
Subject: Pubic Land use near Pinedale,WY

Sounds like to me this ambitious project needs to be scaled back. Hopefully you are going to limit well pad density to no more than one per 2 square miles. 1

My sources tell me that this isn't multiple use of public lands, but dominant use. Please please don't screw this up because of greed on the BLM and gas companies part.

Adrian Shell
24383 Greenbrier Lane
SouthBend, IN 4614

topkicke8juno.com

LETTER 74

January, 23, 2000

Bureau of Land Management
Mr. Bill McMahan, Project Manager
280 Highway 191 North
Rock Springs, Wyoming 82901

Dear Mr. McMahan:

This is in response to your Draft Environmental Impact Statement for the Pinedale Anticline Natural Gas Field Exploration and Development Project. In case you might be wondering why somebody from Laurel, Maryland, cares about what happens on BLM lands in Wyoming, it is because I use this Nation's public lands for recreation. I am an avid big game hunter, bird watcher and all around outdoor enthusiast. I like the big open spaces and wonderful vistas of the west. I spend significant amounts of money coming to places like Wyoming and Idaho for recreation on public lands. The Green River Basin is one of my favorite places to visit. Furthermore, I have this view that the public lands are just that: public. They belong to the citizens, not to the agencies that manage them, and certainly not to the extractive industries that the agencies all too often cater to.

I started out reading your DEIS with the intention of being objective and making constructive comments and suggestions. I am a DOI wildlife biologist by profession and was once project leader for the preparation of a major DOI DEIS, so I know some about the process. It didn't take me long to become pretty discouraged reading your DEIS. Oh, it's a fine, well crafted piece, but by page 2-4 it's pretty clear that the No Action Exploration/Development Scenario, the one I prefer, is not a true alternative. I should have known, for while they say that one should not judge a book by its cover, your cover photo really does say it all: the PAPA is going to be developed. Once again, despite the acknowledged negative impacts on wildlife and other environmental considerations, BLM is going forward with an extractive development allowing long-term damage to the landscape for industry's short-term profit. This development is especially bad, because of its location in one of the last best places in the West. And there is a sad irony to it, because a glut of natural gas exists with producers in other parts of the country unable to sell all their gas. 1

I am especially disappointed with your "not much we can do" attitude now that you are contractually bound by your ill-advised leasing agreement. I think that you still can do some things: for one, authorize only the absolute minimum number of drilling pads and roads. For another, require substantive mitigation, if not on PAPA, on other BLM lands damaged by the extractive industries. They are easy to find. Just take a flight across southern Wyoming. 2

In closing, I ask that all of you in BLM do a little soul searching and start thinking about what you might do for the land instead of to it. BLM has a bad reputation that is only made worse by egregious developments like PAPA. You make enemies out of reasonable people like me. Frankly, I am starting to favor those Executive Orders that limit what can be done on federal land. And, much as I like to hunt, if the Sage Grouse is proposed for listing under the Endangered Species Act, I'll support listing it on the chance that it might stop some development on BLM land.

Sincerely,

John Tautin
12202 Amblewood Drive
Laurel, MD 20708

LETTER 75

January 23, 2000

Gentlemen,
I would like you to know up front that I work in the oil and gas industry and I am writing in regards to the Pinedale EIS. I wanted to write a letter to you because I have seen the overwhelming number of prewritten letters that you people allow to be included in an EIS study. These letters give a false indication of the true feeling of the general public because the public really doesn't know what our industry is allowed to do when these EIS studies are approved.

As I get older and closer to retirement I look back at my career and see the true environmental damage that I have caused in the name of the almighty dollar. I have watched the companies that I work for barely if at all follow the rules set up by the DEQ and BLM. These companies fight, with every legal dollar they have, rules that are in place to protect the environment while all the while claiming to be an environmentally conscience company. An example is the "flare stacks" that were installed on wells in the Granger area. The reason for these were to help the environment and some of the ones we installed the company hand knew full well they would not even work but "they looked like we are complying".

The same is true of what I have been hearing from some of the companies about the Pinedale area. They go to the town meetings and tell people that they are willing to "do what it takes to accomplish their goals without damaging habitat or wildlife" but they say it with their fingers crossed behind their back. People I know in the industry are telling me that some companies are using all thier lawyers to fight every aspect of the EIS and threaten the BLM with lawsuits. Does this not seem morally wrong? Shouldn't the companies themselves feel that their time and dollars would be better served and spent trying to protect rather than destroy? What do you think the country would say if some of these folks commercials said "we are destroying the environment to bring you an environmentally friendly fuel"? 1

All I would like to say is that, from what I have seen in the past, don't believe the companies when they say that they will do what they can even if they are not forced to. Past and current examples show that they are just manipulating us and will only do the minimum required. These projects can be accomplished with all aspects protected(ie. habitat, wildlife and company's economics) but don't rely on the companies to be moral.

Thank you,
An old and tired oilfield hand

LETTER 76

1-24-00

Dear Mr Bill McMahan

It is important to us that our public lands are not suitable for wildlife because of oil companies' greediness. Please stop allowing oil company people to build even more roads for their own benefits on our pristine places. We trust you will act in the best interest of all americans' in this matter. We look forward to enjoying the beauty of Wyoming tomorrow and 80 years from tomorrow. 1

Sincerely,

/s/ Evan
Mary beth chavis
Collee
Mary

(sic)

LETTER 77

Jon Malinski
7400 North Shadow Mountain Rd
Paradise Valley, AZ 85253

January 24, 2000

Mr. Bill McMahon
Project Manager
280 Highway 191 North
Rock Springs, WY 82901

Mr. Tom Frey
BLM Director
Pinedale Anticline DEIS
1849 C. Street NW LSB-204
Washington, DC 20240

Gentlemen:

As a recent purchaser of the Wilkeman Ranch from the Nicholson Family, I feel I should comment on the recently-released Draft Environmental Impact Statement on the Pinedale Anticline Oil and Gas Exploration and Development Project (DEIS). Based on the information made available to me, I understand the project includes approximately 197,345 acres of land, the majority of which (80%) is federal land, with 15% being private land and 5% being state land. Apparently, the project proponents desire to develop at least 700 producing locations, although as many as 900 wells could be drilled.

The unfettered development of a project of this scale would have devastating effects on the ecosystem of the area, particularly when combined with the impact of other developments – including the Jonah II Big Piney/LaBarge and the Fontenelle Fields. However, even the Pinedale Anticline Oil and Gas Exploration and Development Project by itself will have a significant and adverse impact on the antelope population, including the antelope which populate my ranch. However, even more devastating will be the effect of the development on the sage chicken population in the area. It is common knowledge that the sage chicken population has experienced a severe decline in numbers. The drilling of the Pinedale Anticline Oil and Gas Exploration and Development Project at the level being considered will assure the further reduction in sage chicken numbers, if not their total elimination.

There are a number of things that the BLM can and should do which would serve to mitigate the certain environmentally adverse consequences which will be suffered as a result of the Pinedale Anticline Oil and Gas Exploration and Development Project. These would include the following:

1. Limit the total number of wells that may be drilled for the project. 1

2. Limit the total number of wells that may be drilled in any one year. 2

3. Prohibit drilling activities during sensitive or critical periods, such as wintering periods for deer and antelope and sage chicken breeding and nesting periods.

4. Prohibit drilling where required to protect breeding and nesting areas for sage chickens. 3

5. Limit well density to one well per section and require offset drilling for further development within a given section. 4

6. Require compliance with all federal and state environmental quality standards, and in particular air quality standards. 5

7. Limit access routes, pipelines, power lines and related uses to established corridors to prevent haphazard development.

8. Bury all power and power lines to protect birds and scenic views. 6

9. Require all oil drilling and production facilities be constructed in such a way and of such color as to be as compatible with the surrounding area as is reasonably possible. 7

10. Limit drilling and production activities to a preconceived environmentally sound plan so that such activities are implemented in stages and over an extended period of time. 8

11. Place a moratorium on new leasing until the environmental impacts of the present program can be and are fully evaluated. 9

12. Apply these environmentally sound criteria across the board to include private lands as a condition for drilling on public lands in an effort to assure the maximum protection to the ascetic and ecological values attributable to the entire area. 10

The Pinedale area and its wildlife population, by their very nature, are unique and should be protected. The implementation of the recommendations contained herein will not preclude the development of the oil and gas reserves in area, but will help assure not only the protection of the area, but also the wildlife contained therein.

I appreciate being afforded the opportunity to comment on the DEIS and would appreciate being informed what, if any, action the BLM ultimately intends to take with respect to the implementation of the suggestions I have set forth herein. Thanking you for your consideration, I remain

Sincerely yours,

Jon Malinski

LETTER 78

Texaco Exploration and Production Inc
Denver Region
Rock Springs Operating Unit

1515 9th Street
P.O. Box 1629
Rock Springs, WY 82902-1629
307/352-3100

January 25, 2000

Mr. Bill McMahan
280 Highway 191 North
Rock Springs, WY 82901

RE: Pinedale Anticline DEIS

Dear Mr. McMahn:

Even though Texaco is not an operator in the Pinedale Anticline Project Area, (PAPA) we feel it necessary to comment on some of the proposed actions, fearing that if adopted they would become an operating standard for other National Environmental Policy Act, (NEPA) decisions where Texaco does have a vested interest.

Texaco would oppose having to drill 4 wells from a common pad for several reasons: Pad drilling assumes that a drill pad large enough to accommodate 4 drill holes would be centrally located in the quarter section. That probably would not be possible due to restrictions such as topography, archaeology, T & E species, raptors, sage chicken leks, and view shed, to mention a few. Directional drilling is still significantly more expensive and risky. Many wells that need to be drilled to effectively drain the reservoir could not because of economics. As the Life of the Project, (LOP) progresses, and gas prices traditionally rise and fall, operators are likely to seek relief from a restrictive drilling scenario, by requesting further analysis by BLM to increase wells densities. Thus through the LOP nothing will be accomplished by dictating pad drilling. 1

To mitigate the amount of surface disturbance needed for 8-16 wells per section, Texaco could support the use of Centralized Production Facilities (CPF). Considering the life of a gas well to be 20 years, the drilling stage takes up less than 1% of the time. A CPF takes into account the other 19 + years. Impacts such as traffic, noise, dust, and surface use are reduced and restricted to the CPF area. The <1% drilling time can be regulated to minimize impacts, but the production phase must continue 12 months every year. 2

From past experience Texaco has found that a CPF should be located, as the name implies, centrally. We see no reason for a stipulation of locating them down hill from the wells. Instead of a T-pak, Texaco has successfully placed a line heater on the well location, and run fuel gas back from the CPF in the flowline ditch to fire the line heater. Well pressure will push the gas and liquid from the well to the CPF, and no pump equipment is needed. Visits to the well sites are significantly curtailed, and road standards reduced.

Thank you for this opportunity to comment on the DEIS, and we are optimistically looking forward to the publication of the Final Environmental Impact Statement. Texaco requests to be put on all mailing lists that pertain to the PAPA.

Sincerely,

Dallas C. Bennett
Texaco E & P, Inc.
Rock Springs, WY

LETTER 79

Edwin Lavino
P.O. Box 420
Moran, WY 83013

25th January 2000

To whom it may concern;

Please restrict all oil and gas development within a minimum of a half a mile of the New Fork River and historic sites. I'd like to see the oil pads clustered when possible to maintain the integrity of the winter ranges. 1

Thank you for your time.

Sincerely,

Ed Lavino

LETTER 80

1/25/2000
To: Bill McMahan/RSFO/WY/BLM/DOI@BLM
cc:
Subject: Fwd: Pinedale land

Bill,

I am writing to let you know of my concern in the leasing of gas wells in the Pinedale area. I am a non resident who comes from Pennsylvania to hunt in your beautiful state. Please don't let the well drillers do what they did in our areas in Pa. I hunt in an area in the Allegheny National Forest that 10 years ago was a beautiful area. You could walk for several miles and it would seem you were in a wilderness area. Now there are roads every 100 yards and trucks traveling them all the time. There used to be native brook trout in the small streams and you felt you could drink the water. Now the trout are all gone and there is oil scum on the water. It has ruined a great area just to make some money for a few well drillers. Don't let this land be ruined. 1

Sincerely
Daniel N. Lindsey
11312 Lakeside Drive
North East, Pa 16428

LETTER 81

Bureau of Land Management
Bill McMahan (Project Coordinator)
280 Hwy 191 North
Rock Springs, WY 82901

January 25, 2000

Re: Pinedale Anticline Project

Dear Sir:

I have reviewed the Draft EIS for the Pinedale Anticline Project. Because I believe the potential for adverse impacts from this project is greatest to migratory mule deer and pronghorn populations, my comments address only these resources.

The BLM has compiled a thorough DEIS based on the scientific information available. The existing science upon which to assess impacts to wildlife from gas and oil development is, however, largely inadequate, as acknowledged by the DEIS. While studies have emphasized analysis of impacts to habitat from energy development, documented impacts applicable to the project area do not include effects on wildlife populations from habitat loss and behavioral changes.

The probable effects upon winter range habitat from surface disturbance alone are identified as "significant" in the DEIS. Of equal concern should be the potential impacts upon deer and antelope populations from long-term behavioral changes associated with human disturbance. Little scientific data is available in this area of study. The notion held by many that migratory mule deer and pronghorn will habituate to disturbances associated with energy development is based almost entirely upon anecdotal evidence and is largely without foundation in the scientific literature.

"Habitat Models" described in the DEIS incorporate "zones of effect" surrounding well pads in an attempt to quantify potential habitat loss given various parameters, including changes in behavior in response to human activity. The models, however, are not designed to predict cumulative impacts on deer and antelope herd behavior from widespread and long-term vehicle and human disturbance. The BLM should not discount the possibility that the cumulative response of these herds to some as yet unknown threshold level of disturbance over a concentrated project area may be abandonment of large areas of winter range far in excess of levels predicted by the habitat models, resulting in long term and significant population declines.

During the scoping process of this project, the U.S. Fish and Wildlife Service expressed concern that "oil and gas development in Wyoming is proceeding at a pace that may be harmful to wildlife and its habitats." The USFWS requested that the BLM include a cumulative effects analysis of oil and gas activities in the area. In its attempt to address this issue, the DEIS acknowledges "habitat functions of crucial and non-crucial winter ranges have become diminished since the early 1980s;" that is, before the proliferation of oil and gas development. As with most attempts to identify factors influencing the dynamics of wildlife populations, numerous variables exist which preclude a precise identification of a cause and effect relationship here. But the fact that over 4,000 oil or gas wells could still be drilled for NEPA-approved project areas within the Sublette Antelope and Mule Deer Herd Units should be a source of concern for anyone who values healthy big game herds in this state. This DEIS could only conclude that "the situation warrants much closer investigation before cumulative effects due to oil and gas developments can be discerned or predicted." Thus, the BLM cannot adequately address the issue of cumulative effects on big game populations.

What will be the fate of migratory big game herds that depend on the winter ranges of the project area? The DEIS does not and cannot answer this question with any degree of scientific confidence. The "burden of proof," therefore, must reside with the proponents of this project. To that end, they have funded significant research that will ultimately contribute to a fuller understanding of wildlife impacts implicit in energy development in Wyoming. But until that and other research substantially adds to the scientific base, the BLM must proceed with caution. The rush to develop must not be allowed to leapfrog the process of scientific inquiry.

Given the potential magnitude of this project combined with the "meager state of knowledge" regarding impacts to wildlife, the only environmentally and legally responsible option to the BLM seems clear: the agency should impose a phased development, the so-called "obvious alternative" described in the DEIS, to slow the pace of development while monitoring further scientific study of long-term cumulative impacts to wildlife.

Slowing the pace of development triggers adverse project economics according to the operators and the DEIS refers to "reasonable" mitigation measures that do not "infringe" upon the lesees' rights. I submit that the operators would have been remiss in their investigative duties had they not foreseen the potentially stringent mitigation measures involved in any development scenario within one of the most important big game winter ranges in Wyoming. Surely they were well aware, before taking these leases, that optimum economic recovery of energy resources would conflict with the BLM mandate to protect wildlife resources. The "obvious alternative" would significantly reduce many of the environmental impacts, according to the DEIS. Until a substantial body of scientific evidence is developed that adequately predicts effects on big game and other wildlife populations from gas and oil development, the BLM would be negligent to allow development to proceed in any other manner. 1

Thank you for this opportunity to comment on the Pinedale Anticline DEIS.

Sincerely,

Robert R. Barrett
P.O. Box 408
Pinedale, Wyoming 82941

LETTER 82

P. O. Box 1281
Saratoga, WY. 82331
Jan. 26, 2000

Bill McMahn
%BLM,
280 Highway 191 N.
Rock Springs, WY. 82901

Mr. McMahn

This letter is in regards to the 900 new natrual gas wells that the BLM is proposing to have drilled near Pinedale.

What is the BLM thinking about when they allow this kind of disaster to take place on our BLM lands.
This area could never recover from this kind of destruction.

These are our public lands to be used by all of us, and not for the select few in the mineral industry. The damage to the wildlife and its habitat in this area, can never be repaired. So consider a much smaller scaled project for the area or none at all. 1

I am a native of Wyoming, and I am getting tired of seeing more and more of our public lands being destroyed for the sake of big industry and for a few people to get rich from it.

Pat Rollison

Pat Rollison
Saratoga, WY.

LETTER 83

8300 West 131st St.
Palos Park, Illinois
60464

January 26, 2000

Mr. Bill McMahan
BLM
280 Highway 191 N.
Rock Springs, Wyoming
82901

Dear Bill McMahan

I ask you to use your authority to restrict industrial and vehicle activities during critical wintering periods for deer and antelope, and also during spring nesting for sage grouse and birds of prey. 1

Thank you.

Sincerely yours,

Byril J. Sanders

Byril J. Sanders

5-158

LETTER 84

CHARLES C. RUMSEY, JR.
P.O. Box 304
1350 Wood River Rd.
Meeteetse, WY 82433

Bill McMahan, Project Manager (BLM)
280 Highway 191 North
Rock Springs, Wy 82901

Jan. 27, 2000

Dear Mr. McMahan:

I am writing to urge restraint in new oil and gas development in the Green River Basin. I urge the BLM to choose the Resource Protection Alternative which limits the extent of such activity in the area.

Although I am in the oil and gas business, I believe less pollution, less road density, less drilling activity, and greater protection of wildlife habitat in this area is more desireable for the Basin. It will increase other resources – scenic, recreational, and serenity. 1

LESS IS MORE!!!

Yours Very Truly

Charles C. Rumsey Jr.

cc: Tom Fry - BLM Director

Telephone: (307) 868-9260

FAX: 307-868-2339

LETTER 85

P.O. Box 400
Pinedale, WY. 82941
Jan. 28, 2000

Bill McMahan, Project Manager
280 Highway 191 North
Rock Springs, Wy. 82901

Dear Mr. McMahan:

I am writing this letter, because, being aware that the JONAH 11 and now the Pinedale Anticline Project projects has been and is becoming more thoroughly, the industrialization of the Green River Valley.

As a consumer of oil and gas products, I needed to be open minded about the search and retrieval of additional oil or gas. However, as manager of a cattle ranch along the Green River, that had the a lease for the use of the BLM pasture known as the Marincic allotment, I watched the initial impact of the development of the Pinedale Anticline Project.

I was worried, as a someone with a very real tie to the ecological, and environmental health of this land, that the coming development would not be governed by informed, caring people with foresight, but by large corporations that pay good wages to a workforce that cares little for the health and well being of a Sage Sparrow, whose nest in a bush, might be crushed by a six ton ORV that is on another seismic search. I would hope whoever reads this enjoys watching birds.

Admittedly, I do not have time or money to drive out on the Mesa and Desert to witness what is taking place. As a father of a nine-year-old daughter, however, I demand that the BLM do its utmost to preserve every part of this high sagebrush ecosystem that is presently in existence. Watching this land and its entire indigenous species, have enriched my life greatly. I want very much to have my daughter and her peers to have that same opportunity.

I could write much about how I believe this development should be handled which would only convince you how little I know about oil fields. I will simply tell the BLM that I seriously hope that the Resource Protection Alternative is chosen and that as much additional protection for the wildlife, Plants, that I love so much. Thank you for the time.

1

Sincerely,

Kenneth Becker

5-159

LETTER 86

1/28/2000
To: Bill McMahan/RSFO/WY/BLM/DOI@BLM
cc:
Subject: Pinedale Lease operations

Bill McMahan - My comments are directed at the BLM lease operations in the Pinedale area. I have hunted in the Pinedale area in the past and look forward to hunting there again. Living in Alaska has tremendous wildlife resources that I well appreciate, however, Wyoming is known as the best "poor man's hunting", meaning you can afford to hunt in Wyoming as opposed to the high costs in Alaska.

I realize BLM has the responsibility of providing land use for a variety of uses, some very conflicting. I urge you in considering management options for the Pinedale area to consider:

1. Extending your public input process avoid a backlash from conservation groups. 1
2. Work with State and local groups to avoid costly litigation processes.
3. Minimize negative impacts by eliminating any additional leasing.
4. Number of wells should be limited by requirements of wildlife resources; no more than 1 well/pad per square mile. Even this may be too disruptive depending on the wildlife resource involved.
5. New roads and production facilities should be minimized, and traffic restricted to least impact wildlife. The wildlife i-pacts of this operation needs to be documented via well funded research funds provided by the leasing companies. Such studies the wildlife resource and BLM in considering future similar operation. 2
6. There must be a provision guaranteeing removal of drilling operations after lease expires/or production quits. Please avoid the situation where the company stays in business just to avoid the clean-up costs. These are everybody resource, the companies should return the land in the same condition back to the American public. These companies are profiting from public resources, the cost of restoration must be a part of the cost of doing business on public lands. 3

Bill Martin

LETTER 87

1/28/2000
To: Bill McMahan/RSFO/WY/BLM/DOI@BLM
cc:
Subject: Green River Basin

Bill McMahan,

We here in Wyoming love our wide open spaces and being able to go out of town and not see anyone or anything. We do not like the unsightly conglomerate of wellheads that cover the Green River Basin. We understand that some are necessary but we would like you to consider discontinuing new leasing and lapse expiring leases. We would like to see a more centrally located production facilities to minimize the cumulative effects of industrialization. We are urging the BLM to choose the Resource Protection Alternative and provide additional protection for our wildlife, air, water and communities. 1

Thank you,
Tim & Doris DuPont
Green River, WY 82935

LETTER 88

Bill McMahan 1-28-00
280 Highway 191 North
Rock Springs, WY 82901

Re: Industrialization Green River Basin
Pinedale Anticline DEIS

Attention: Mr. McMahan

I hope that every effort is made to protect our communities, wildlife, air, and water from any undesirable changes by this gas and oil development. I realize that this development is necessary and can't be stopped, but it certainly can be scaled back to where damage to the environment is minimal. Your have the means and technology to do this. We don't have to expose our mountain lakes to acid rain. We don't have to put up with the haze that is now developing over Rock Springs because of the trona mines. We don't have to destroy our lands with helter skelter roads and unsupervised waste pits.

I have traveled to every state in the union except Hawaii and have never seen the sky as blue as it is here in Pinedale. Lets keep it that way. It is great to drive from Rock Springs to Pinedale and see the Wind Rivers sharp and clear without looking through a haze. 1

I hate having the basic elements of our environment interfered with by the extractive industries while they are stripping our land of its wealth. There is nothing I can do about it. You can. Control the number of wells and roads, hold down the dust, control the flares and waste pits. Make some rules and patrol the area to see that they are enforced or cancel some leases. Make these organizations doing this developing conscious of the environment. Let them know we treasure out clear rivers, streams, and lakes. Let them know we treasure our herds of antelope and deer that we can go out and see every day

Yours truly,

Buzz Burzlander

Buzz Burzlander
Box A
Pinedale, Wy 82941

LETTER 89

Bill McMahan, Project Mangr.
280 Hwy 191 N.
Rock Springs WY 82901

Dear Mr. McMahan,

I appreciate the opportunity to express my view on the proposed plans to expand the oil & gas development in the Green River Basin. Many of us who have live in this area for a long time are resistant to any more development & in fact would like to see less than there is now based on deteriorating air quality & the increased nitrate levels found in the monitoring studies of alpine lakes in the Wind River Mountains. I have taking part in those studies and have fished those lakes since the 1960's. The changes I can see with my own eyes are as yet not documented by the acid deposition is. It is my opinion that for reasons above and beyond esthetics developments should be limited if not stopped. What drilling & extraction does take place should emphasize efficiency such as centralization of facilities, minimal road construction, private coporate funding of wildlife monitoring studies as well as interagency personnel to monitor compliance and impacts of operating developments with the capability of shutting down operations for non-compliance, establishment of multifunctional corridors for pipelines roadways, powerlines, etc. to reduce the "spread out" negative effects on habitat and wildlife so often seen in other intensively developed sites in this state and others. Companies involved should also expand agency monitored lake, snow and stream studies in the Wind River Range with an enforcable "shut down" capability well dangers to the pristine environs of wilderness are observed.

Thank you,
John Mioncznski

1

2

LETTER 90

1/29/2000
To: Bill McMahan/RSFO/WY/BLM/DOI@BLM
cc : LJDorsey@aol.com
Subject: (no subject)

Dear Bill:

I am writing you concerning the proposed 900 natural gas wells in the Pinedale area. I am fortunate to have hunt in the Pinedale area for the last +/-15 years. In fact, several of my trips were to just accompany the hunters and enjoy the beautiful outdoors in the area. I am very concerned when plans are to start several well locations in the area. I worked for Chevron Oil Company for the past 31 years, and all of it was in the drilling department. I drilled wells all over the southern US, on land and offshore, and all over the world. I know what it cost to drill and how complicated drilling is. I feel that you can minimize the impact to the environment by using directional wells to drill several wells from one pad. With the new technology available today, extended reach wells are fairly simple and cost effective to drill. If you maximize the number of wells per pad, you will be able to centralize production facilities. All these things will minimize the impact to the environment. I know Chevron is a very strong proponent of protecting the environment, but I am not sure some of the independents are willing to incur extra cost to develop a field. I hope you can regulate the drilling of these wells where the results will be a win-win for the environment, operator, and the state. 1

I am looking forward to being in your great state this coming hunting season.

Sincerely,
Richard Robichaux
2117 HWY 308
Raceland, Louisiana 70394
PH-(504) 446-1928

LETTER 91

1/31/2000
To: Bill McMahan/RSFO/WY/BLM/DOI@BLM
cc:
Subject: Pinedale Anticline

Bill McMahan: At a time when game managers throughout the country are concerned about the decline of mule deer and sage grouse populations, here we are in Sublette County preparing to carve up one of the last remaining wide open game ranges in the West as if it were going to make a difference.

Throughout my entire life I have been amazed and disgusted at the reluctance of land managers and politicians to do what is right for the land; and at their eagerness to sell out to big industry, otherwise known as BIG MONEY. 1

Development in the Pinedale anticline is no doubt going to proceed. I certainly hope the BLM will scale the pace and methods of development to give some measure of protection to the other values that are present in the region. To me, wildlife, open space, clean air and the absence of industrialization are more valuable than all the natural gas on the planet. Plan carefully or Sublette County and western Wyoming will be transformed into something similar to the rest of the world: All screwed up.

John Fandek,
Cora, Wyoming

LETTER 92

William R. Rogier
PO Box E
Pinedale, Wyoming 82941

January 31, 2000

Bureau of Land Management
Mr. Bill McMahan (Project Coordinator)
280 Highway 191 North
Rock Springs, Wyoming 82901

Re: Pinedale Anticline Natural Gas Exploration and Development Project
Draft Environmental Impact Statement

Dear Mr. McMahan,

I am a resident within the proposed Pinedale Anticline Project Area, and have tried to be involved in the local process of public input related to the sensitive nature of this proposal. As this project moves forward at the expense of significant resources I ask that you:

- **Recognize the important and unique natural resources found both within the Project Area, and in the more inclusive surrounding areas of the Yellowstone/Teton/Wind Rivers.**
- **Apply critical skills to predict outcomes of large scale industrial activities on the other natural resources.**
- **Evaluate the results, understanding the great complexities and many unknown variables related to this project.**
- **Draw a conclusion that conservatively balances the costs of development and the short term economic gains.**

The first three of the above suggestions have been partially implemented through the Draft EIS. No single individual has the expertise to predict the outcomes of development on the many resources being considered. This document deserves recognition as a fair statement of our current understanding of the issues related to resource protection of a relatively pristine area of Wyoming during industrialization. My comments related to this study are based upon my experiences living next to six wells drilled within the project area on private, federal, and state lands over the past year and a half.

1. Air Issues

Quality

The modeling of air quality is marginal at best, due to our incomplete understanding of the air pollution and atmospheric processes, the unknown variables related to the input and types of pollutants, and the synoptic characterization of the local and upstream conditions. Based upon what we do know and are likely to encounter, there will be significant effects due to particle/chemical emissions. The "significant criteria" standards have been set too large. There will be reduced visibility due to emitted and grown particles and photochemical reactions. Humans and wildlife will ingest the released chemicals and particles. While the modeling indicated minimal effects under the assumed conditions, I recommend inclusion of the model limitations, and input parameters for the "accidental" excursions of particulate and chemical matter into the project area. While the model shows plumes "highly visible for hundreds of feet", I have recently observed flare blowouts, hydrocarbon burns, and drilling exhausts visible for thousands of feet. The low level inversions frequently found in this area, coupled with high energy sunlight, cold temperatures and moisture produce effects not adequately modeled.

1

Sound

Again, my observations indicate the "farm in valley", and 10db increase for significant effects is not based in reality. Even at a mile from a drilling/completion operation, the noise prevents sleep and overshadows the background sounds of wildlife and river. There should be relatively easy mitigation remedies for this problem.

2

Light

Night time light coming from unrestricted point sources, and backscattered light from aerosols and hillsides contribute to unresolved light pollution. I suggest all lighting sources, both temporary and permanent, be shielded and directed to the specific work area.

3

2. Water Issues

It is interesting to note that our domestic well, and that of our neighbor (about a mile away), both experienced problems related to water quality at approximately the same time (during the completion of a nearby gas well). Both wells were drilled in the 1950's, and have never had any similar problems. I am always suspicious of coincidence. I therefore recommend the monitoring program for groundwater include all domestic wells within the project area. I also feel all monitoring should be accomplished by an outside agency, not the operators of the project.

4

3). Future Leasing

I recommend that future leasing of minerals within and near the project area, be withheld until an analysis of this major project has been completed and reviewed. This should apply to both new leases and existing leases up for extension or renewal.

5

Conclusion

With my limited understanding of the resource issues, I have some faith the Draft EIS is valid in its assessment of potential effects. Therefore it seems reasonable to accept its conclusions and:

Draw a conclusion that conservatively balances the costs of development and the short term economic gains.

I suggest the decision makers implement the DEIS Resource Protection Alternative for all lands and minerals within the project area, with all mitigation opportunities. This is a conservative suggestion, realizing that while the EIS attempts to predict resource outcomes, the effects will exceed the predictions. We should develop the hydrocarbon resource, but not at the expense of the other valuable resources. If marginal wells are not developed at present due to the cost of mitigation, that hydrocarbon resource will be available for future exploitation, when more cost effective methods for mitigation will be available.

I also feel strongly the mitigation standards required for development within the project area be applied to all lands and minerals within the project area. I understand the BLM has no expressed authority to mandate such actions, but I also know the BLM has strong areas of influence in such matters. I recommend the Memorandum of Understanding between operators and the BLM includes statements of voluntary compliance of mitigation measures to State of Wyoming and private lands within the project area.

I sincerely thank you for the opportunity of allowing public input into this process, particularly from residents within the project area.

Sincerely,

WRRogier

William R. Rozier
PO Box E
Pinedale, Wyoming 82941

2 February, 2000

Bureau of Land Management
Mr. Bill McMahan (Project Coordinator)
280 Highway 191 North
Rock Springs, Wyoming 82901

Re; Addition to :
Pinedale Anticline Natural Gas Exploration and Development Project
Draft Environmental Impact Statement

Dear Mr. McMahan,

In my comments on the Pinedale Anticline Project, I made suggestions referring to water issues within the project area. I wish to address the subject of monitoring and compliance, and ask that you include the following in my written statement.

The Draft EIS recommends that the concept of adaptive management be used to continually improve the project. Part of this concept implies a plan for data collection from project monitoring. This is a nontrivial goal that should be followed. One of the natural resources monitored will be water, while another certainly will be air.

The sediment of the rivers, particularly the New Fork below Pinedale, will be effected adversely, along with its related physical parameters. I also have concerns for domestic and stock water. Both the chemical, biological, and physical parameters I suggest be monitored. The overall monitoring plan should not include every domestic well within the project area. I assume a statistical survey will be done for collection of all data.

Air quality monitoring is another area of concern. Many parameters need to be accurately measured including weather, visibility, aerosol concentration and size, insolation, chemical component and concentration, and sound/vibration. Some areas within the project area will need much more resolution than others. Critical zone and inversion prone areas are examples.

I sincerely thank you for the opportunity of allowing public input into this process, particularly from residents within the project area.

Sincerely,

6

LETTER 93

Cat Urbigkit
P.O. Box 1663
Pinedale, WY 82941

Bureau of Land Management
Bill McMahan, Project Manager
280 Highway 191 North
Rock Springs, WY 82901

Feb. 1, 2000

re: Pinedale Anticline EIS

Dear Bill:

Thanks for the opportunity to review the Pinedale Anticline EIS and Technical Report.

First I would like to commend PIC Technologies, Inc., for the preparation of the best EIS I have ever read. It's huge and somewhat hard to follow, but I couldn't find any significant subject that hadn't been well reviewed. I also feel the document provided a fair and honest discussion of both the existing situation and possible impacts. This EIS could provide a good baseline for others to follow. Thank you, I really do feel it was a great job.

My comments are specifically directed at the selection of one alternative or another. Instead, I found a few problems that can easily be resolved in the final EIS.

- On page 2-46, the last sentence on the page drops off mid-sentence and is not completed on following pages.
- The map on 4-55, near the right side of the page reads T33N, which should actually be T31N.
- In the section entitled "Proposed wildlife species" on page 3-65, the New Fork River is incorrectly identified as the "North" Fork River.
- In the rare plant habitat discussion on page 3-66 and 3-72, Burma Peak and Burma Point are used interchangeably.

Lastly, it is gratifying to see Ross Butte/Blue Rim identified as a special management zone. This unique area has a variety of sensitive resources that need special management consideration. The combination of highly erodible soils, special status plant and bird species, and other resources underlie the need to avoid surface disturbance in this area while maintaining the existing livestock grazing and trailing operation.

1

Thanks for your consideration of these comments.

Cat Urbigkit

LETTER 94

/

2/2/2000

To: Bill McMahan/RSFO/WY/BLM/DOI@BLM

cc: tom_a_fry@IOS.DOI.GOV

Subject: Pinedale PAPA DEIS Comments

Dear BLM Office,

RE: Executive Summary Page 2, Col 2, Para 2 "It is unlikely that adverse socioeconomic impacts would occur from development. However, very positive impacts would result from the significant revenues which could be generated by development in the project area"

The above statement is only very narrowly true. The history of such development over the last 150 years has proven conclusively that such development always causes a large number of negative socioeconomic impacts, which remain with the community long after the extraction industry has left. The boom-bust cycle is a well known phenomena in Wyoming. Such boom-bust cycles always leave the community with a lower quality of life, bringing with it such problems as greater drug and alcohol abuse, greater community conflicts, prostitution etc. It is extremely misleading to emphasize only on the financial outcome to the county.

RE: Executive Summary Page 3, Col 2, Para 2 "Extensive air quality modeling was conducted to determine potential impacts from the project..... The results of modeling show that no exceedence of National Ambient Air Quality Standards would occur. In addition, no significant impacts to wilderness and Class I Airshed Air Quality Related Values would occur from project development and roduction, even at the maximum levels analyzed in this EIS" 1

There are many flaws with the above logic. Firstly, this modeling method, favored by the industry, frequently underestimates the impacts of any development. This combined with the extreme sensitivity of the Class I and Class II airsheds means that in actuality there will be acceleration of the acidification and other deposition that is already occurring in these sensitive areas.

Also the DEIS ignores the actual field data that has been gathered and analyzed over the last 15 or so years. This data already clearly shows acidification occurring at an ever increasing rat, especially over the last 5 years. Any EIS that ignores this data will, of course, produce erroneous results. The Forest Service is already very concerned with the detrimental effects that have been seen with the present level of development. This PAPA project will certainly increase acid deposition and other environmental damage. These impacts would violate the law of protecting Wilderness airsheds. 2

RE: Executive Summary Page 4, Col 1, Para 5 "Four threatened/endangered species were identified by the US Fish and Wildlife Service as potentially occurring in the PAPA - ..... The analysis has concluded "no effect" to these species. 3

If the DEIS actually considered even a partial development scenario's effect on sensitive wildlife, there would be no way it could make a statement of "No effect". You can not destroy habitat and expect

wildlife to survive. Even the DEIS admits that due to even small scale development that the area would be avoided by humans for recreational purposes, how more so if the PAPA was the land you depended on for your survival. 3

Even in the next para the DEIS states "However, there is no combination of mitigation measures that would eliminate many of the significant impacts described above. If development is extensive significant impacts would occur."

DO NOT RENEW EXPIRING LEASES: One of the easiest ways to reduce the impacts of the PAPA would be to not renew any of the expiring leases. Many leases expire in 2000 and 2001, so much of the sensitive areas could be removed from mineral leasing. This would be by far the best, most efficient method of controlling impacts. 4

Thank you for your time,

Jonathan B Ratner
Sublette Riders Association
PO Box 1277
Pinedale, WY 82941

- att1.htm

2/2/2000
To: Bill McMahan/RSFO/WY/BLM/DOI@BLM
cc: tom_a_fry@IOS.DOI.GOV
Subject: Pinedale PAPA DEIS comments

Dear BLM,

EXECUTIVE SUMMARY Page 4, Col 2, Para 4 "The air quality visibility analysis....." Visibility is the least of the problems from the PAPA development. The Wind River area are extremely sanative to acidification. For instance the Absorokas average an ANC (Acid neutralization capacity) of 1,340 where as the average ANC for the WInds is around 56. Research has already documented a rapid increase in acidification of the last few years as more and more oil and gas development occurs in SW Wyoming.

The Leasees should be required to implement all "Resource Protection Alternatives" and be required to make use of all the latest technologies to eliminate of gasing from wells.

Leasees should all be required to use pad drilling under all circumstances. Also centralized production facilities should also be require of all leasees. 5

Drilling should be limited to slopes less than 15 degrees, 25% is way too steep for resource protection.

.25 miles from recreation areas or dwellings is as good as none. That is only about the length of 3 football fields. .25 miles provides no protection for other resources. 6

All tanks should be limited to 9' high.

Require all leasees to use directional drilling to reduce the number of well pads. Of course they dont want to but the BLM should require all measures that can be implemented. 5

4-7 Table 4-1 "BLM believes that the operators are best suited for implementing construction and environmental monitoring." This statement ignores the reality that has been experienced for well over 100 years. A company's sole focus is making a profit, anything that may reduce profits has historically been rejected by industry. To trust the leasees to be concerned about impacts would be rediculous. 7

4-75 Col 1, Para 1 "When the maximum estimated concentrations.....do not exceed.." This does not take into account the effects already experienced or the far greater sensitivity of these Class I and II areas than the NAAQS or WAAQS standards are based on. 8

Jonathan B Ratner
Sublette Riders Association
PO Box 1277
Pinedale WY 82941 - att1.htm

LETTER 95

2/3/2000
To: Bill McMahan/RSFO/WY/BLM/DOI@BLM
cc:
Subject: Pindale Anticline Comment

Dear Mr. McMahan

We appreciate the opportunity to comment on the Draft EIS for the Pinedale Anticline Oil and Gas Project. We have read with interest the work done by your office as well as others on the project. We have lived and worked in Western Wyoming all of our 33-50 years. We love the Pinedale area for both work and play and recognize its unique place in Wyoming and the West. We have been involved in many projects that have responsibly used our public lands to gain great benefit for all involved. We firmly believe a successful balance of development and protection of the environment has and will continue to be found in these areas.

We support the Project Wide Exploration/Development Scenario for the following reasons:

#1. The agencies and industries involved have been successful in striking a balance on past projects. This relationship gets better each project and will continue in the future.
#2. This will do our part in keeping up with current demand for a cleaner burning fuel to power our economy. If gas use is projected to be up by 40% in the near future, Wyoming should be at the leading edge of supply.
#3. No matter how we try to ignore mans need for energy, it exists! We must do the best we can to responsibly use while putting back better than when we came in to the area. Minimal impacts can be achieved through proper mitigation during and after the project.
#4. Sublette County and the State of Wyoming depend on responsible use of proper Federal Lands. Obvious energy needs can be balanced with environmental concerns.
#5. Good science indicates that plant and animal life can adjust to minor disruptions. This will be proven more as industry and governmental agencies work together.
#6. The majority of Americans support the multiple use idea of public lands. There are areas that should and will not ever be developed. We must however, responsibly use marginal areas such as these in the PAPA.

1

Please keep us on your list for information about the EIS as is comes available.

Thank You

McKay L. Erickson
2886 HWY 241
Box 1474
Afton WY 83110
307-886-9018

Robyn K. Erickson
3497 Dry Creek Road
Afton WY 83110
307-886-3982

LETTER 96

2/3/2000
To: Bill McMahan/RSFO/WY/BLM/DOI@BLM
cc:
Subject: PAPA Draft EIS comments.

Bill McMahan
BLM Office
280 Hwy 191 N.
Rock Springs, Wy 82901

Re: Comments on the draft EIS for the Pinedale Anticline Natural Gas Field Exploration and Development Project.

Please accept the following comments on the PAPA draft EIS:

1) I have lived in Wyoming for over 25 years, have worked in oil fields, and currently make my living as an outfitter. I live in Wyoming by choice because of the hunting, fishing, and outdoor recreation opportunities available. Development of our state's natural resources MUST be done in an orderly, well thought-out fashion or else we risk damaging forever wildlife habitat and those recreational opportunities needing open space and solitude. The BLM must proceed with the planning of this project not with maximizing production of gas for industry operators as the goal, but rather for protecting and preserving wildlife habitat and wild lands for future American generations.

2) Cumulative Impacts. Already the Green River Basin is crisscrossed with roads, power lines, pipe lines, and fences. The hand of man has pushed several species of animals to the edge or over the edge of extirpation in the region. We can no longer weigh the impacts of a proposed project as if it were a single island. Instead, the BLM must weigh PAPA with the numerous other man-caused efforts in the Green River Basin which have harmed wildlife habitat.

3) The size of the proposal must be scaled down, with the number of wells allowed to be drilled reduced and developed in stages in order to minimize impacts. Companies permitted to drill should be held to a post-development reclamation plan including a no net loss of wildlife populations connected with PAPA development. In addition, companies should be required to provide off-site mitigation for unavoidable damage and loss of wildlife habitat.

1
2

4) Air Quality. As a Fitzpatrick Wilderness Area licensed outfitter who often takes clients fishing in the world-class waters of the Northern Wind River Mountains, I am particularly concerned about air quality and acid rain. The granite formation of the high Wind Rivers has little buffering ability from acid rain. The BLM should require companies to help pay the cost of air and water quality monitoring.

5) Currently the BLM has a "lease everything" policy unless proven to be worthy of withdrawal from leasing. The result is that development is only limited by mineral industry markets and profits. Instead of this leasing structure, the BLM must let leases in a measured way based upon the needs of wildlife and

other public land users. This new structure in itself will reduce impacts.

6) As part of any BLM permits, companies should be responsible for their employees actions. Companies should provide a policy which immediately terminates any employee found breaking state or federal rules or laws. 2

7) Transportation Plan. Perhaps the most critical work the BLM must complete before this project proceeds is to development a transportation or road management plan for the entire Green River Basin. This needs to be a comprehensive plan that maps existing roads, identifies duplicate roads, and determines roads which should be closed during the winter months in critical game animal winter ranges. Other sensitive species such as sage grouse must be evaluated in creating a transportation plan. Road density standards should be used to evaluate existing road numbers. 3

8) The BLM must work with the Wyoming Game and Fish Department to map big game migration routes and winter range as well as sage grouse leks in the PAPA. As part of all permits, the strictest protection of these areas must be required. 4

9) As the PAPA permitting process proceeds, the BLM should keep in mind that at best only a limited amount of natural gas currently needed by America may be produced in the PAPA. On the other hand, America stands to loose forever yet another piece of her priceless wildlife habitat and pristine lands. The choice is full-scale, immediate industrialization or measured development while protecting wildlife habitat. We have an opportunity to proudly leave a thriving wildlife legacy to future generations if we proceed wisely, or we can focus only on companies' profits and a few months worth of natural gas and leave nothing.

Thank you for this opportunity to participate in the management of our nation's public lands.

Sincerely,

Tory Taylor
6360 Hwy 26
Dubois, Wy 82513

LETTER 97

Mr. Bill McMahan, Anticline EIS Team Leader, February 3, 2000

Please accept these comments as my personal opinions concerning the Anticline energy development project proposed in eastern Sublette County, near Pinedale. I am a small landowner in Bargerville, and also own a house in Pinedale, and have lived in this area for thirteen years. I moved here because of the beauty of the area, and to be close to the recreation provided by the area (hiking, fishing, hunting, unspoiled public lands). I love this country and its history, beauty and rural setting.

I find that implementing the development proposed will ultimately and inevitably result in overwhelming changes to the rural, ranching cultural character of Pinedale and Boulder. Gone will be the quiet setting, the natural beauty of the BLM lands west of town. Instead, we will live in an area of industrialized development and gradually Pinedale will become much more like Big Piney or even LaBarge. How will this negative change be mitigated? The operators should be required to pay a percent of their production to the local government bodies (the Town of Pinedale, the residents of eastern Sublette County) to fund mitigation projects that will help replace the lost recreational and rural cultural lifestyle they will take away from us. Projects like adding onto the golf course (though I don't golf), the ski area, or paying for a recreation center would help mitigate the loss of recreational lands to development. What about some housing for the population increases that are inevitable? The Anticline development change will be permanent-the fund should be set up to provide for a permanent income to fund such projects. 1

While living in Bargerville for over four years, the few wells drilled on the Mesa made a lot of noise, especially noticeable at night and in the winter when cold, clear nights seem to carry the roar of the drilling rigs further. The glare from the flares really bothered me and my neighbors. Many mornings I awoke to sooty smoke clinging to the sky, the result of the night's flaring. Many more wells will make this situation unbearable. What will the mitigation be? No flaring? The EIS says that to mitigate noise pollution, the operators will drill in the winter when windows are closed (page 4-78). This is ridiculous! Obviously, they have never lived in the rural setting in winter, when the cold clear night sky is literally aflame with stars and many of us like to enjoy stargazing at a crystal clear night sky unencumbered with the flaring, the noise, the smell. I recommend BLM require mitigation of the noise and flares to the greatest extent possible-perhaps flaring into the pipes, or no flaring at all. Who says they have to flare, anyway? I think the cumulative effect to air quality will be a permanent mar on our landscape. 2 3

The Mesa is a great wildlife area-not just for wintering deer, but along the river where ducks, geese moose, eagles and many other animals live. BLM should regulate the developers to the greatest extent possible to protect all the wildlife. I recommend that BLM and the developers set up a wildlife mitigation fund where a percent (why not just say arbitrarily 1% of production) of the production is available to pay for wildlife mitigation projects- fisheries, studying the effects on the large mammals, migratory waterfowl and the like. Fund acquisition of fishing access along the rivers, enhanced fisheries projects, construction of duck ponds, winter range enhancement projects. The operators take so much away from us-they should be required to leave something back. Eagles, hawks and other raptors abound in the area. I also think that the buffers for raptors is too small, especially if a nest is active. Why can't a ½ mile buffer be established for raptors? 4 5

It has been said that the development is a "done deal" because the leases are already granted. I'm not saying "don't develop" but I am strongly saying that some of the profit made by the developers (which comes from public resources on public land) should be specifically earmarked to the local people who moved here, not to live next to an oil field, but to live next to the mountains, the lakes and rivers. 6

We live in such a beautiful area-it would be a travesty not to see maximum effort made in preserving this beauty. Call it VRM or whatever, I give the BLM a challenge to show us how good of a job they can do in preserving the beauty of the area by carefully planning the development to take advantage of natural screening (hills, ridges), natural colors, blending things in to the best of their ability. A little effort here can reap so much positive good.

I have heard from many local ranchers that they feel like they're in a Catch 22 with the development. They didn't understand the development potential when they signed the leases, or their neighbors did. There seems to be an injustice here. If BLM and the operators have the staff and the expertise, it seems only prudent to make that expertise available upon request to help local landowners out if they're faced with the impact of development. Don't the public employees work for the public, as well as the oil companies? Shouldn't the "little guy" expect some help from government, not always the oil companies? Why not help with planning the reclamation, or river crossings, or riparian restoration? 7

In summary, it is apparent to the reader that I view the development with great fear and trepidation. This is because I have lived in Wyoming for over 20 years and I have seen the devastation a Boom and Bust economy does to the local economy. I do not want to see that happen here. This EIS is my only chance to speak my mind, as a free citizen in a free country. I enjoin the decision makers to use their power to minimize the effects as much as possible, to see a percent of the money go to improving the local area (most severely impacted by the development), to adopt the most stringent of resource protection alternatives. Whatever we do now directly and permanently shapes what we plan to give our grandchildren as their inheritance of their public domain. Lets make them proud of us!

Respectfully Yours,

David Vlcek

David Vlcek
Box 184
Pinedale, WY 82941

LETTER 98

2/3/2000
To: Bill McMahan/RSFO/WY/BLM/DOI@BLM
cc:
Subject: PINEDALE ANTICLINE PROJECT

DEAR MR. McMAHAN,

THANK YOU FOR EXCEPTING OUR COMMENTS ON THE PINEDALE ANTICLINE PROJECT.

THESE LANDS WERE DESIGNATED AS MULTIPLE USE FOR THOUGHTFUL, DELIBERATE REASONS. THIS AREA IS NOT A NATIONAL PARK, IT IS NOT A WILDERNESS AREA, NOR IS IT A WILDERNESS STUDY AREA. IT IS AN AREA POTENTIALLY RICH WITH NATURAL GAS, SUFFICIENT FOR CATTLE GRAZING, VITAL FOR MANY WILDLIFE SPECIES, BEAUTIFUL FOR ALL TO ENJOY, HUNT AND FISH ON, AND THEY ARE LAND ABLE TO SIMULTANEOUSLY SUPPORT THESE MANY DIFFERENT USES.

SUBLETTE COUNTY HAS BENEFITTED FROM THE OIL AND GAS INDUSTRIES IN THEIR AREA. LOOK AT THAT BEAUTIFUL SCHOOL THAT THE PUBLIC HEARING WAS HELD IN PINEDALE. THE PEOPLE OF THE COUNTY SHOULD BE THANKFUL THAT THEY WANT TO DRILL THERE FOR THEIR ECONOMIC WELL BEING. ALL LOT OF THE MONEYS BROUGHT INTO THE COUNTY ARE PUT TO GOOD USE AND IS BENEFICIAL TO ALL THAT LIVE THERE. 1

MULTIPLE USE OF THESE LANDS CAN PROVE ECONOMIC ACTIVITY CAN COINCIDE WITH ENVIRONMENTAL PROTECTION -NOT PRESERVATION- BUT PROTECTION, AND ALL OUR NARROW INTERESTS, WHEN BALANCED, CAN BE MANAGED TO BE WINNERS.

THANK YOU,
LARRY & LaVETA PENNOCK
156 LESTER DRIVE
ROCK SPRINGS, WY. 82901

LETTER 99

D.C. PRODUCTION SERVICES

DON CARLSON
OWNER
P.O.BOX 1127
ROCK SPRINGS,WY 82902

Telephone 800-551-3406
Fax 307-382-7254

February 3, 2000

William B. McMahan
Bureau Of Land Management
Rock Springs, WY.

I own a production flow-test company in Rock Springs. We have been in business in the state of Wyoming for the past twelve years. Over the last several years we have been testing numerous wells in the Pinedale (Sublete County) area. We generate a lot of taxes to that particular area, and a lot of our subcontractors, although some do not live there, purchase supplies and all other necessities in that area, generating to your community more revenue.

We live and work and play in a beautiful state. We have raised are family here. We spend a lot of time in the Pinedale area. The last thing we would want to do is to destroy the very place we work and play. We have been involved in the Oil & Gas business for many years and we hope to see it prosper for many years to come, working hand in hand with environmental and industrial concerns.

The Pinedale Anticline project, if closed, can and will effect a lot of good people who have chosen to live and work here. It can also effect a lot of people who don't live or work here.

1

Sincerely,

Donald a Carlson

Don Carlson
Owner
DC Production Services

LETTER 100

February 3, 2000

1793 (930)
Pinedale Anticline

Bureau of Land Management
Bill McMahan, Project Manager
280 Highway 191 North
Rock Springs, Wyoming 82901

Tom Fry, BLM Director
Pinedale Anticline DEIS
1849 C Street NW LSB-204
Washington, DC 20240

Linda F. Baker
P.O. Box 1262
Pinedale, Wyoming 82941

Dear Mr. McMahan,

Thank you for this opportunity to comment on the Draft Environmental Impact Statement for the Pinedale Anticline Natural Gas Field Exploration and Development Project in Sublette County, Wyoming.

This DEIS has made it very clear, that the Pinedale Anticline Project will go forward. And just as surely, our legacy, healthy populations of native wildlife will falter. The vast herds of pronghorn and mule deer, the wintering thousands of sage grouse will not be seen again in our life times.

Perhaps with the proper stewardship that we all hope someone in the future will assume, that we ourselves lack the courage to enforce, our herds and flocks will rebound. And perhaps the world will become even more crowded, the Green River Valley will continue down its present road, and become something entirely different.

There is every reason why we should proceed on this huge landscape alteration with the utmost caution. The valuable gas underlying this valley has been there a long time and will remain. Its value is in its longevity as well as its abundance. There are too many valuable resources at stake, each one of which is as important as any other to our country's citizens, and each one of which the BLM has a mandate to preserve.

Neither do we know just exactly what effect the unbridled rush to develop will have on ultimate numbers of pronghorn, mule deer and sage grouse; ravens, meadowlarks and jackrabbits; pintails, horned toads and great gray owls. This project will be studied closely, however, as a pilot project. But corrections to mistakes may be too little too late. By the time we realize the extent of destruction, we will have lost our chance to regain biological ground for a very long time.

I believe it is a mistake to consider this document as an amendment to the Pinedale Resource Management Plan, covering not just this project, but the entire 931,000 acres, in decisions that will be with us for such a time. DEIS states "This EIS will serve to update the impact analysis for reasonably foreseeable development for oil and gas drilling in the Pinedale RMP." (DEIS 1-13) However, since BLM is considering this as such, I wish to point out that CFR regulations state, "A resource management plan shall be revised as necessary.... Revisions shall comply with all of the requirements of these regulations for preparing and approving an original resource management plan." (43 CFR 1610.5-6) "Ninety days shall be provided for review of the draft plan and draft environmental impact statement. The 90-day period shall begin when the Environmental Protection Agency publishes a notice of the filing of the draft environmental impact statement in the FEDERAL REGISTER." (43 CFR 1610.2 (e) Since this DEIS was published in the Federal Register on November 24, 1999, that would give the public until February 24th, 2000 to comment. This requirement has not been met by BLM. 1

In addition, both the Notice of Intent to prepare the EIS and the Notice of Availability of the EIS published in the Federal Register should have informed the public of the proposed amendment, although neither did. "Upon starting the preparation, amendment or revision of resource management plans, public participation shall be initiated by a notice published in the FEDERAL REGISTER" (43 CFR 1610.2 (c). This is an important oversight depriving the public of vital information necessary to informed comment. I suggest that BLM publish said notice in the Federal Register and allow the public an appropriate comment period starting from the time of publication.

The basic reason for contemplating totals of either 500 or 700 wells is because "the BLM must...require 'that all operations...[result] in the maximum ultimate recovery of oil and gas.'" (DEIS 2-5) According to the Code of Federal Regulations, the definition of "*maximum ultimate economic recovery* means the recovery of oil and gas from leased lands which a prudent operator could be expected to make from that field or reservoir given existing knowledge of reservoir and other pertinent facts and utilizing common industry practices for primary, secondary or tertiary recovery operations." (43 CFR Ch. II, 3160.0-5 (k) Maximum recovery is defined based on existing knowledge of the reservoir. In this case, that knowledge doesn't exist. "Insufficient information is available to understand exactly how the Pinedale Anticline should ultimately be developed." (DEIS 2-1). But to offer operators a carte blanche to drill while trying to define the reservoir necessarily excludes protection of all other resources. "BLM cannot impose a limit on the number of well pads in the PAPA." (DEIS 2-6) If the program that allows "maximum recovery of oil and gas" fails to protect other resources in these "seemingly inconsistent directions" as they are mandated to do, then BLM has not provided effective mitigation such that "all operations be conducted in a manner which protects other natural resources and the environmental quality, protects life and property." (43 CFR Pt. II, 3161.2)

DEIS at 2-5 states, "Restrictions that can be imposed on an operator are addressed in 43 CFR 3101.2." This should be corrected to 3101.1-2. "A lessee [is]...subject to: such reasonable measures as may be required by the authorized officer to minimize adverse 2

impacts to other resource values, land uses or users not addressed in the lease stipulations at the time operations are proposed." A "reasonable" measure would be one which reduces significant impacts to wildlife, rather than creating them in abundance. Therein lies a compromise that allows some drilling, allows some impacts to habitat, but each type of activity concedes a bit to the other. The concept of "reasonable" is tossed to the four winds, where BLM states that "BLM cannot impose a limit on the number of well pads in the PAPA without precluding development of some of the leases in the PAPA." With no upper limit to the number of well pads, modeling has no relevance. An air, water or wildlife model cannot predict consequences that continue ad infinitum. Impacts have no end. And BLM fails to protect all other resources, which it cannot do. 2

BLM is *fully* within its legal rights to impose limits on the number of well pads and should do so to protect such vitally important resource values. I recommend that at this point the BLM limit the number of well pads to 300 total and no more than 1 per section on the Anticline Crest, after which impacts can be more clearly assessed. IBLA "considered staggering development over time an '*obvious alternative*'" (DEIS pg. 2-43) 3

This idea is further enforced by the *Sierra Club vs. Peterson* (717 F. 2d 1409, 1983) decision. I am not asking to deny all permits to drill. Legal precedent has been set, however as the DEIS states on page 2-4: "The Department...impose mitigation measures upon a lessee who pursues surface disturbing exploration and/or drilling activities." By limiting the number of wells, this still "allows *some* surface disturbing activities."

This has nothing to do with analysis of an alternative that is "outside the capability of the applicant." (DEIS 2.3.3) The burden here falls on the federal agency to simply build brakes into an unbridled program of development. In fact, with a slower pace, lessees are incurring less risk and cost of drilling potentially unproductive wells.

BLM states that "limiting the number of well pads to less than 4 per section...may result in a taking of the lease rights granted to the operators." If more than 4 wells per section are drilled, would the acknowledged impacts result in the taking of the value of the wildlife from the people of Wyoming? Will they be compensated for this taking? Will they be compensated for the lost opportunities to hunt deer, antelope and other game animals? Will they be compensated for the lost opportunity to enjoy the benefits of the WG&F "Watchable Wildlife" program, on which Wyoming taxes were spent? 4

The Pinedale RMP states that "wildlife habitat management will be oriented toward the maintenance of fish and wildlife habitats.... Activity planning will emphasize habitat enhancement and protection." Operators were well aware of these covenants promised to public land and wildlife owners in a publicly reviewed and approved legal document when they took these leases. 5

Where does it say in any Federal document that the needs of the operators are more important than the needs of the other resources? Where does it say that a balance of resource requirements cannot be attempted? Why will it "not be possible to achieve both of these goals"?

On the other hand, I applaud the intent of the Resource Protection Alternative on Federal Lands and Minerals. Unfortunately, it falls short of a truly protective alternative. I ask that another alternative be considered containing the following recommendations.

- Despite the difficulties and expense of utilizing pad drilling, "natural gas consumption in the United States is expected to increase by more than 40 percent by 2015" (DEIS 1-5), and costs will be justified in the long term. When you consider how long it takes to replace lost habitat in a high desert ecosystem, the additional cost is indeed worth it. Lost habitat, the biggest threat to our national wildlife, is also "expensive and risky." Consider a quote from the Strategic Plan of the Wyoming Game and Fish Department Agency Philosophy: "Successful wildlife management depends on good habitat. Indeed, wildlife and their habitats are inseparable. Diverse populations of wild, free-ranging terrestrial and aquatic wildlife are indicators of the health of Wyoming's land and water." Therefore, I again ask BLM to limit well pads to no more than 1 per section, and encourage pad drilling. 6
- I ask that there be absolutely no loss of wetlands in the PAPA. 7
- There should be no more than 20 wells drilled in one year. 8
- Operators should be required to set aside 2% of their net profits to offset impacts to Sublette County government services such as schools, law enforcement, road improvement and maintenance, recreational facilities, family services and library services. 9
- On Federal lands and minerals, no well pads should be located within 1.0 mile of subdivisions, subdivided lands, or lands zoned for residential use. 10
- Some portion of lands should be preserved for dispersed recreation exclusively, as big trucks and bicycles do not mix. 11
- No impact should be allowed whatsoever to the Wind River Front Special Recreation Management Area. 12
- VRM Class II designated lands should be maintained with limits that allow no degradation whatsoever. 13
- In Sensitive Viewshed SRMZ, no more than 1 well pad per section should be allowed. 14
- Absolutely protect surface waters in the Green and New Fork rivers from non-point source pollution through strict regulation and enforcement. The water should be protected for fish and other dependent wildlife, as well as for recreational opportunities. The Pinedale RMP states that "management emphasis will be placed on the current recreation management areas including...the Green and New Fork rivers, [and] Oregon Trail route." (Pinedale RMP, 37) 15
- It should be noted that the Bald Eagle Protection Act (16 U.S.C. $$ 668-668d) prohibits taking of bald and golden eagles, regardless of their location on public or private land. "Taking" does include molesting or disturbing, and the reference to bald eagles in Table 2-15 (2-59) infers that taking may occur with certain levels of development. This would clearly violate Federal law. 16

I would like to see a new section added to the FEIS that takes into account whether the recent 3-D seismic exploration was helpful, and whether it would protect and add understanding of the resource to conduct further 3-D testing. 17

I request that BLM delineate mountain plover habitat, and conduct studies to determine probable numbers of plovers in the PAPA. I also request that BLM design an effective management plan for the plover that protects plover habitat. 18

I request that BLM conduct pygmy rabbit surveys that delineate and protect habitat and determine appropriate management guidelines for the rabbit. 19

In regard to air quality, according to the "Wind River Bulk Deposition Program, Bridger-Teton National Forest, Summary of 1998 Data, May, 1999, nitrate deposition steadily increased overall during the years 1986 to 1998. Sulfate deposition also increased during the same period. BTNF has collected data from sites throughout the Wind River Range for the past 14 years. In that time, according to a USFS employee who collected data, some of the collected samples have exhibited an acidity of ph 4 or below, a level capable of killing aquatic invertebrates on which fish depend. Yet the BLM elected to use a model to project cumulative impacts to the Class I airshed, despite having access to actual data. And it is interesting to note that that CALPUFF model showed that "there were no predicted exceedances (sic) for any of the thresholds or standards for Class I PSD increments...or for impacts to sensitive lakes (acid deposition)." (DEIS 5-19) How can an additional 700 producing wells placed upwind of high mountain lakes with virtually no buffering capacity not have any effect on the ambient air quality that has been deteriorating for the past 14 years? I request that an independent study be done on projected impacts that utilizes all the hard-earned data that the USFS has so diligently collected, and that the results be presented to the public in a way that the layperson can understand. For example, the USFS study reveals deposition in kilograms per hectare per year. That is imaginable. How does one interpret micrograms per cubic meter with an increment of 2? What percentage increase does that represent? Over how much time? At what point can we expect to see significant change in the cutthroat trout habitat of Black Joe Lake? What is the point at which trout no longer rise to a fly? I also request that operators fund 10 additional collection sites to expand the acid deposition monitoring program in the Wind River Range. 20

In regard to sage grouse, the BLM, Idaho Department of Fish and Game, Washington Department of Fish and Wildlife, and the Colorado Division of Wildlife have updated management guidelines published in 1977, and drafted new ones entitled "Guidelines for management of sage grouse populations and habitats." The new draft guidelines represent "present knowledge of the species' ecology and present guidelines for management of sage grouse populations and protection and restoration of this species' habitat." Some of the recommendations contained therein have already been implemented by Wyoming Game and Fish, or are in the process. I wish to point out some others that are relevant and particularly important to the PAPA and to this locale in general. (See guidelines for more specific information.) 21

Breeding Habitat protection

- Manage breeding habitats to support 15-25% canopy cover of sagebrush, perennial herbaceous cover averaging greater than or equal to 18 cm in height with greater than or equal to 15% canopy cover for grasses and greater than or equal to 10% for forbs and a diversity of forbs during spring.
- For non-migratory grouse occupying habitats that are uniformly distributed...protect...sagebrush and herbaceous understory within 3.2 km of all occupied leks.
- For migratory populations, identify and protect breeding habitats less than or equal to 18 km of leks in a manner similar to that described for non-migratory sage grouse.
- Adjust timing of energy exploration, development, and construction activity to minimize disturbance of sage grouse breeding activities.

Breeding Habitat restoration

- Restore degraded rangelands to a condition that again provides suitable breeding habitat for sage grouse by including sagebrush, native forbs (especially legumes), and native grasses in reseeding efforts.
- Where the sagebrush overstory is intact but the understory has been severely degraded and quality of nesting habitat has declined, use appropriate techniques...that retain some sagebrush but open shrub canopy to encourage forb and grass growth.

Summer/Late Brood-rearing Habitat protection

- Avoid land use practices that reduce soil moisture effectiveness, increase erosion, cause invasion of exotic plants, and reduce abundance and diversity of forbs.
- Avoid removing sagebrush within 300 m of sage grouse foraging areas along riparian zones, meadows, [and] lakebeds...
- Avoid developing springs for livestock water, but if water from a spring will be used in a pipeline or trough, design the project to maintain free water and wet meadows at the spring.

Summer/Late Brood-rearing Habitat restoration

- Use brush beating or other appropriate treatments in strips 4-8 m wide in areas with relatively high shrub canopy cover...to improve late brood-rearing habitats.
- Only construct water developments for sage grouse in or adjacent to known summer use areas and provide escape ramps suitable for all avian species and other small animals.
- Whenever possible, modify developed springs and other water sources to restore natural free-flowing water and wet meadow habitats.

Winter Habitat protection

- Maintain sagebrush communities on a landscape scale, allowing sage grouse access to sagebrush stands with canopy cover of 10-30% and heights of at least 25-35 cm regardless of snow cover.

21

"We recommend that each state and province develop and implement conservation plans for sage grouse. These plans should use local working groups comprised of representatives of all interested agencies, organizations, and individuals to identify and solve regional issues." That is my personal recommendation regarding sage grouse in a nutshell.

21

Again, thank you for your consideration of my letter. I look forward to participating in a balanced and thoughtful revision in the coming decision documents.

Sincerely,

Linda F. Baker

Linda F. Baker

LETTER 101

Bill McMahan Fax (307) 352-0329

New York, N.Y.
Feb. 4, 2000

Bureau of Land Management
Bill McMahan, Project Coordinator
280 Highway 191 North
Rock Springs, Wyoming 82901

Dear Bureau of Land Management,

I would like you to know that I appreciate the Pinedale Anticline DEIS. It is comprehensive, humane and readable and it suggests some truly protective measures for Sublette County if only these safeguards will be carried out.

I am asking that you follow the most stringent mitigation opportunities listed in every Chapter of the DEIS.

In particular, I hope you keep insisting that Centralized production facilities would be helpful in mitigating damage to several threatened resources.

I am including a copy of the Comments I had read for me at the BLM meeting on Jan. 12.

I am also including a letter I sent to the Sublette County Commissioners. I don't think, now, that my appealing to the

1

5-174

Commissioners may be a solution to my Concerns about gas exploration and development on private land. Instead, I am asking if the BLM might be able to encourage a meeting for landowners because, as the DEIS states, private land has so many Crucial resources. I think private landowners may benefit from further information and help from the BLM and an exchange of ideas among landowners would definitely be useful.

2

I have one more specific request. Would it be possible for all groundwater to be carefully monitored, at least on the BLM? We are having a problem with Contaminated well water at the Monroft ranch. It may be only a problem with an older well, but after years of wonderful well water - suddenly and coincidentally with gas exploration the water turns bad. It would be a shame for groundwater to become ruined, even on private land.

3

Sincerely,
Sylvia Londoral
on behalf of the Monroft Family Partnership

318 W. 100th St.
New York, N.Y. 10025

CCs to David Vlach
and Pinedale Resource Area

Sublette County Commissioners
Sublette County Court House
21 South Tyler Avenue
Pinedale, Wyoming 82941

December 6, 1999

Dear County Commissioners,

I am writing to ask if there are possible steps that you might take to support the Bureau of Land Management's position that there is a real need for mitigation guidelines pertaining to oil and gas exploration and development on private land. The BLM made this need clear in their Draft Environmental Impact Statement for the Pinedale Anticline Oil and Gas Exploration and Development Project, Sublette County, Wyoming.

All of the adverse impacts that gas development can cause on BLM land are even more destructive on private land. I say this because, as the DEIS points out, much of the private land in Sublette County is in critical locations. It runs along rivers and historical and cultural corridors. It encompasses productive ranches and residential areas. This land is full of abundant wildlife and beautiful scenery. Unfortunately the standard oil/gas leases, that most landowners have signed, lack any serious protection for the significant value of private land, aside from the mineral worth.

The cumulative effects from gas wells on private land will be extremely detrimental to the whole community unless somehow all landscapes, rivers, wetlands, riparian areas, wildlife, ground-water, cultural areas, recreation and ranching receive some resource protection, as suggested in the DEIS.

Also, numerous gas wells on private land will immediately diminish the quality of human life in Sublette County if mitigation measures are not taken in regard to air standards, noise abatement and well proximity to dwellings.

Of course, I am aware that private lessors are left to their own discretion when leasing mineral rights, but here I must speak for myself and the Mocroft ranch. I don't think I am alone in realizing, too late, how tilted towards the oil/gas industry standard leases are and how difficult or impossible it is to negotiate real environmental mitigation with the gas companies. And yet, I still think these companies should be held responsible to and should have meaningful consideration for the communities that they enter whether they are developing gas production on public or private land.

The DEIS accurately describes the unique beauty of Sublette County and also warns of the dangers of gas production becoming too dense and unmitigated. Sublette County could become what I would describe as an industrial wasteland. Many people in the community see the sadness of such a possibility.

I am wondering if you would be able to bring about any protections on private land through zoning ordinances and if you are empowered to do something about one of the most grievous threats to nature and human life (not to mention hay meadows) - the oil/gas industry's prerogative to put a well every forty acres. This well density stipulation is not mentioned in standard leases.

Please contact me if you would be willing to have further discussion about these issues and thank you for your consideration.

Sincerely,

Sylvia Sandoval

Sylvia Sandoval

on behalf of the Mocroft Family

318 West 100th St,. Apt. 1B
New York, NY 10025-5372
Telephone: (212) 749-4261

LETTER 102

John Spahr

From: John F. Spahr, Jr. [PMcNeill@compuserve.com]
Sent: Friday, February 04, 2000 3:22 PM
To: Bill McMahan
Cc: Tom Fry
Subject: Pinedale Anticline DEIS comments

Date: February 4, 2000

TO: Bill McMahan, Project Manager
280 Highway 191 North
Rock Springs, WY 82901
bill_mcmahan@blm.gov

Tom Fry, BLM Director
Pinedale Anticline DEIS
1849 C Street NW LSB-204
Washington, DC 20240
Tom_A_Fry@IOSDOI.gov

Dear Mr. McMahan and Mr. Fry,

My family and I regularly use BLM lands in Wyoming for recreation. We all appreciate the important and beautiful high desert wildlife habitat covered in this DEIS. We are very concerned about how activities proposed in the DEIS area (Pinedale Area Project Area, PAPA) will also affect other nearby public lands, which we also utilize and enjoy, such as the Wind River Mountains, Bridger-Teton National Forest and Shoshone National Forest.

5-176

While much of the PAPA is already leased, that does not mean that this important part of the southern Greater Yellowstone ecosystem (GYE) must be sacrificed as an industrialized area. A balance of resource extraction and resource protection must be established to prevent the southern GYE from becoming a wasteland of pump jacks, criss-crossed by innumerable roads. The benefits of mineral development have historically been short-lived compared to long term benefits of open spaces, scenic vistas, abundant wildlife and clean air and clean water that we all still enjoy in Wyoming.

The industrialized scenario outlined by the DEIS includes drill rigs, pump jacks, roads, treaters, pipelines and the entire infrastructure that goes with industrial development. It must be balanced against other uses of the PAPA BLM lands. We recommend a process of slow, deliberate, staged development that takes critical wildlife habitat, migration corridors, air and water quality into consideration. We support efforts to develop conservation strategies for free-ranging wildlife in the Green River Basin and ecologically responsible land-use and wildlife management. This can be done by identifying and protecting the important habitat and migration routes of wildlife stretching from Yellowstone National Park south to the Red Desert and Great Divide Basins, and to the Colorado Rockies.

We need more information on air quality. The modeling of air quality in the DEIS is marginal and insufficient. The "significant criteria" standards have been set too high. Reduced visibility, ingestion of the released chemicals and particles by humans and wildlife, and visible emissions and flareouts have been too readily dismissed in the DEIS. Low level air inversions are frequently found in the Green River Basin area. When these are coupled with high energy sunlight, cold temperatures and moisture they can produce effects that have not been adequately modeled and planned for. 1

Numerous impediments to historical wildlife movements have been constructed during the past century in the PAPA and in adjacent wide areas. These include roads, railways, urban and suburban development, and fences as well as oil and gas development. Many large terrestrial wildlife species no longer move across the western Wyoming landscapes in accordance with historical patterns due to habitat fragmentation by roads, fences, oil and gas and other development. Therefore, if pronghorn antelope, moose, elk, mule deer, bison, and large carnivores are to be able to travel across large tracts of land in response to seasonal and resource influences, a large-scale conservation strategy is needed. The final PAPA EIS must recognize this and be an integral part of this strategy.

In the DEIS, the BLM admits that the project will have significant impacts on water and air quality and wildlife populations. Historically, pronghorn, elk, bison, and deer
migrated through the Pinedale area between summer ranges in Greater Yellowstone ecosystem and winter ranges in the Green River Basin. The pronghorn migration through western Wyoming is the longest of any ungulate in North America except the caribou in Alaska. Once a stronghold for sage grouse populations in the West, the Green River
Valley has experienced severe decline of its upland bird population. These significant impacts you project are unacceptable.

We support the "Mitigation Opportunities" set forth on pp.4-165 to 4-168 (DEIS), and encourage their adoption as part of the final decision in this matter. We urge the BLM to require compliance by their permittees with all Mitigation Opportunities identified in the DEIS. A huge area of Wyoming is at stake and the BLM has the responsibility to protect, not just lease it.

Specifically, we recommend that you adopt an alternative for the PAPA EIS that would include the following elements:

1. STOP FURTHER LEASING. We request that the BLM discontinue all new leasing and lapse expiring leases in the Green River Basin until the impacts of such widespread
industrialization can be evaluated.

2. LIMIT WELL DENSITY. There should be no more than one well pad allowed per square mile. This limitation is extremely reasonable, and will probably benefit industry as much as the public, since it will force industry to select the best prospects for drilling first.

3. LIMIT THE TOTAL NUMBER OF WELLS. The DEIS considers only two development alternatives: 500 wells or 700 wells. According to the DEIS, some experts think that only 300 wells are needed to explore the PAPA. This makes an obvious third alternative, one limited to 300 wells. A 100 well alternative is also reasonable to offer, since it would allow for some limited development now, and if there proved to be a need for more wells after the field has become more well defined, another EIS could be done to take a second look at further development. 2

4. REQUIRE SLANT DRILLING. Horizontal drilling should be utilized, since centralized pad drilling and centralized production facilities will help to minimize the cumulative effects the large scale industrialization contemplated by this project.

5. REQUIRE AND ENFORCE SEASONAL SUSPENSIONS OF OPERATIONS. Development operations and travel should be suspended in the project area during critical wintering periods for deer and pronghorn antelope. During the spring season require stipulations to protect breeding and nesting areas of sage grouse and birds of prey. Require that operators fund wildlife, water and air quality monitoring studies for the duration of the project.

6. COVER ALL WASTE PITS. In order to prevent large-scale wildlife, migratory song bird and raptor losses, wastepits should either be eliminated and replaced with closed waste systems, or all waste pits should

be covered at all times.

7. ENFORCE YOUR RULES. An interagency monitoring team should be established to track industry compliance with BLM, Wyoming DEQ and EPA standards and to head off environmental violations, or reduce the environmental effects of those violations.

8. STRICTLY ENFORCE AIR AND WATER QUALITY STANDARDS. Require that operators use electric compression to minimize impacts to air quality. Do not allow pollution limits to be exceeded on even a temporary basis. Enforce state and federal air and water quality standards to reduce emissions and fugitive dust. The Green River is a Class 1 water, above the confluence with the New Fork River, and it should be remembered that under state regulatory requirements, no new discharges are allowed to Class 1 waters. Care should be taken to prevent indirect discharges to the Green River, by requiring that there be no pollution discharges to tributaries of the Green River, and no waste pits should be allowed within the flood plain of the Green River.

9. REQUIRE GOOD STEWARDSHIP ON PRIVATE LAND. While we understand that the BLM has very limited authority on private land, to the extent that communitization and pooling requirements require that operators coordinate their drilling between federal leaseholds and private leaseholds, and thus impact upon BLM's jurisdiction, we urge the BLM to require that all industry operators implement the same resource protections on the leased private land as they are required to do on public land.

10. EXPAND MONITORING OUTSIDE THE PAPA. Monitoring of the Wind River Range lakes needs to be expanded, given the anticipated impacts from increased air pollution The existing monitoring studies need to be improved, with additional sites, in order to cover all areas of the Class I airsheds of the Bridger-Teton and Shoshone National Forests. The Wind River Lakes studies conducted by the US Forest Service have already demonstrated an increase of NOX in Class I waters of the wilderness areas and reduced visibility of mountain vistas. The cumulative effects of so the PAPA development, along with the many other development projects underway or contemplated in southwest Wyoming, will inevitably have long-term effects on this sensitive high desert ecosystem and its surroundings.

11. LIMIT ROAD CONSTRUCTION Development corridors should be used to reduce the impacts of roads, pipelines and power lines. Power lines should be buried to eliminate avian electrocution and decimation of scenic views. According to studies conducted in the area, roads, well sites and human presence displace antelope, deer, moose and sage grouse from their native range.

12. REQUIRE RECLAMATION USING NATIVE PLANTS. Reclamation of disturbed lands should be accomplished with native species, particularly adequate sagebrush, native grasses and forbs.

13. STAY AWAY FROM SAGE GROUSE LEKS. The most recent studies on sage grouse indicate sage grouse are very sensitive to any disturbance within two miles of sage grouse leks, during their mating season. Because of the unprecedented decline of the sage grouse in Wyoming and throughout the west, we recommend that no oil and gas development be allowed within two miles of a known sage grouse lek anywhere within the PAPA or any new ones that might form.

14. LIMIT TRAFFIC. Transportation across crucial winter range on the PAPA should be severely limited, and employee car pooling should be mandatory to reduce traffic congestion in and out of Pinedale, via Tyler Street.

5-177

2

15. CONTROL SOUND AND ARTIFICIAL LIGHT. Currently, oil and gas development already taking place close to Pinedale has shown significant effects. Even at a mile from a drilling/ completion operations, the noise level of drilling pad operations prevents sleep and overshadows the background sounds of wildlife and river. Light coming from unrestricted point sources at night, and back scattered light from aerosols and hillsides contribute to significant light pollution. All lighting sources, both temporary and permanent, should be shielded and directed to the specific work area.

16. PROTECT GROUNDWATER RESOURCES. Some domestic wells in the PAPA have already been affected just since drilling has started in the PAPA (during the completion of nearby gas wells) These water wells had not had any previous water quality problems. A monitoring program for groundwater should be established, and include all domestic wells within the project area. This should be done by a federal or state agency, at the expense of the operators. The groundwater should not be tested by the operators of the project, or their contractors.

17. DON'T TRY TO MAXIMIZE PRODUCTION. The mandate of the BLM is to manage the resource for all users, despite the rather confusing wording of the CFR sections quoted in the DEIS. Maximization of mineral lease development would result in intolerable destruction of the surface resource for many other uses, not the least of which is ranching, grazing, wildlife habitat, hunting, and recreation. Maximization is mutually exclusive of resource protection for these other uses. Limited development must proceed without impacting surface resources.

18. SLOW DOWN. By approving a development project at such a large scale, the BLM is perpetuating Wyoming's history of boom and bust economies that ultimately threaten the stability of local communities.

2

According to the DEIS, "No technically or economically feasible level of mitigation can be applied in these areas to minimize the severity of impacts to less than significant. The only way to eliminate these impacts would be to take the lease rights granted to the lessee...."

Without eliminating the right to extract the resource, we believe the BLM can and should do plenty (as outlined above) to control and restrict the impacts on the surface (and groundwater) resources. The BLM'S Resource Protection Alternative (RPA) does start to address conservation concerns by reducing roads and traffic, excessive use of groundwater and displacement of wildlife, but it must be improved to prevent devastating long-term effects of this potentially huge project on our natural resources. Full-scale oil and gas industrialization of the Green River Basin is not the only option. Concerns for additional protection of our communities, wildlife, air and water can and should be addressed.

We hope that you will carefully consider our comments and proceed carefully and slowly with any development, taking into account the needs of other resource values, since it is those other resource values and resource needs that will remain long after most of the oil and gas has been removed from the Green River Basin.

Sincerely,

John F. Spahr

John F. Spahr
PO Box 4798
Jackson, WY 83001

LETTER 103

2/4/2000
To: Bill McMahan/RSFO/WY/BLM/DOI@BLM
cc: tom_fry@blm.gov
Subject: Pinedale Anticline DEIS comments

February 3, 2000

Bill McMahan, PAPA Manager
280 Highway 191 North
Rock Springs, WY 82901

Dear Mr McMahan,

The approach of the BLM and the oil and gas industry has been to put the burden of proof on the public when it comes to protecting public lands.

I was a field technician who collected air and water quality data from 1985-92 and was the public interest representative to the Green River Basin Visibility Steering Committee until it dissolved. So my views are based on something besides blind ideology and/or a desire to profit financially.

I favor slow, deliberate, staged development that takes critical wildlife habitat, migration corridors, air and water quality into consideration. Despite the undoubted fact that much of the Pinedale Anticline Project Area is already leased, some of the leasing was done in direct violation of FLPMA, and the Class I provisions of the Clean Air Act. Thus, the BLM simply lacks the authority to convert this critical wildlife habitat and migration corridor, and the Class I wilderness airshed downwind, to what is in effect a single-use industrial sacrifice area. 1

If private commercial development is to proceed in this sensitive area it must proceed with caution and stringent resource protection. The economic benefits of mineral development have historically been short-lived compared to the longterm benefits of open spaces, scenic vistas, abundant wildlife, clean air, and pristine water that we all enjoy in Wyoming. But BLM's agenda appears to derive for the most part from that of the oil and gas industry.

-The BLM must also recognize that the PAPA is so close to the Class I Bridger Wilderness that both the current state and federal monitoring programs and the computer models used are technically inadequate to assess and/or predict violations of the Clean Air Act Class I provisions. 2

-Geographic Information Systems (GIS) mapping technology should be used to portray historical, current, and anticipated natural and man-made landscape features, (such as watercourses, vegetation, roads, fences, oil and gas development, subdivisions and towns) as well as the critical habitat parameters (grazing, predation, birthing, travel, and winter ranges) of wildlife and their key travel corridors in that landscape.

-Numerous impediments to wildlife movement have been constructed during the past century, such as roads, railways, urban and suburban housing, and fences. Oil and gas development compounds these impacts. Many species of wildlife no longer migrate, breed, or winter in accordance with historical patterns owing to the cumulative effect of habitat fragmentation. Thus, if pronghorn>antelope, moose, elk, mule deer, bison, and large carnivores are to be able to travel across the area of concern in response to seasonal and resource influences, a large-scale conservation strategy is needed. The PAPA EIS must be an integral part of this.

-According to Hall Sawyer's latest radio telemetry studies, all 28 radio-collared pronghorn were located on 1-14-00. No collared animals>remained in the Jackson Hole Valley or the Gros Ventre River Drainage. Similar to last winter, 90% (n=25) of the pronghorn were found within the Pinedale Anticline Oil & Gas Project Area, along the New Fork River. Two were found in the Jonah Field, south of Stud Horse Butte. Another was located two miles west of Farson, approximately 140 miles from where she summered.

-Portions of the PAPA are also critical to declining sage grouse, for which the present BLM buffer zones around leks and other critical habitat areas are clearly inadequate and without scientific support.

Large-scale leasing in the Green River Basin is an irretrievable commitment of resources to mineral development. For that reason I ask the BLM to discontinue all new leasing and to allow expiring leases to lapse until the impacts of such widespread industrialization can be evaluated; 3

Well density on existing leases should be limited to no more than one site per square mile. 4

Pad drilling and centralized production facilities must be required to minimize the cumulative effects of land disturbance. 5

Development and travel in the project area must be limited during critical wintering periods for deer and pronghorn. During the spring season stipulations must be enforced to protect breeding and nesting areas of sage grouse and birds of prey. As a matter of course, operators should fund technically adequate wildlife, wate,r and air quality monitoring studies for the duration of the project, and these should be subject to peer review before the BLM attempts to use them as a basis for NEPA or policy decisions. 6

Operators must prevent the widespread mortality of wildlife, migratory song bird and raptors (not to mention domestic cattle) by installing closed waste systems. 7

There should be continued oversight by interagency monitoring team (with broad and balanced stakeholder participation) to track industry compliance with BLM's standards and to recommend ways of reducing environmental damage. 8

The USFS/State of Wyoming DEQ monitoring programs and the IMPROVE protocol monitoring should be substantially expanded to cover the of the Class I airshed needed to accurately portray the chemical and visual impact of the project, and the data should be analyzed and reported to the public in 9

a timely fashion. 9

BLM should establish a limit of pollution credits on each project such as the PAPA in order to put a cap on the amount of allowable emissions by each lessee. Other states have used pollution credits systems to encourage industry to stay within state and federal clean air standards for specific projects and that could work well for Wyoming as well. In some cases, the operators have even sold or exchanged pollution credits to each other in order to remain below the required standards. 10

BLM should use limited "development corridors" to reduce the damage caused by roads, pipelines and powerlines. Powerlines must be buried to eliminate the electrocution of raptors and impairment of scenic views. 11

Subject to agreement with private landowner, industry operators should implement the same resource protections on the leased private land as they are required to do on public lands. 12

The reclamation of disturbed lands should be accomplished with native species, re-establishing adequate cover areas of sagebrush, native grasses and forbs; 13

Transportation should not take place across crucial winter range on the PAPA and employee carpooling should be required to reduce traffic congestion on the Tyler Street access in Pinedale; 14

Even the BLM acknowledges significant impacts to the resources both within and nearby the PAPA that cannot be avoided under the RPA development scenario. Thus the burden is clearly on the BLM and industry to adopt responsible resource- protection practices, pursue technically adequate studies (and report them), and conserve the irreplaceable values of these public lands.

signed,

Clem L. Rawlins
PO Box 3482
Laramie, WY 82071

LETTER 104

2/18/2000

To: Bill McMahan/RSFO?WY/BLM/DOI@BLM
cc:
Subject: BLM/Pinedale gas wells project

Dear Mr. McMAHAN:

My name is Mark Beck. I live in Laramie, having moved here from Michigan in 1975 to attend the UW graduate program in geology. I choose to stay in Wyoming for the clean air, clean water and relatively unspoiled natural state of the countryside.

I am deeply concerned about the proposed gas well project that you are managing. I have experienced first hand the damage that oil and gas exploration and production can cause. Water quality both surface and underground is always negatively impacted by this kind of activity. Air quality is affected by production and the damage to the land at well sites and roads is often lasting.

I had a good friend who worked well reclamation in Wyoming and through him learned of the all too often devastating aftermath of the production companies leaving the wells open and unreclaimed when they move out.

The area of this project is priceless as to a home for all kinds of wildlife and as part of the natural heritage of the Wyoming outdoor experience. Yet as in the past, I am sure that we shall see it reduced to the value of the gas that can come out of the ground and not for the value of the land, air and water and the flora and fauna that depends on that area for survival.

I am sure that you will oversee this project in a fair and efficient manner and I realize that I do not know many of the factors that you will be required to consider. The pressure of economic development is considerable but I urge you to put as much weight to the side of wildlife and the environment as you legally can.

If there is anything that you could suggest that I would be able to contribute to make a difference in this matter, I would appreciate your advice.

Thank you for your time and consideration. 1

LETTER 105

201 Manville Rd.
Bowling Green, OH 43402
February 9, 2000

Tom Fry, BLM Director
280 Highway 191 North
Rock Springs, WY 82901

Dear Mr. Fry:

I am writing in concern with the industrialization of Green River Basin. It is of my understanding that the Bureau of Land Management has proposed a plan that will increase the natural gas wells of this country by as many as 900. It is also to my understanding that this plan may possibly alter the ecology of only 200,000 acres.

As a young consumer in this great country I have a deeper understanding of the positive impact the oil and gas industry have on our economy. The United States of America did not become an economic powerhouse by preserving natural ecology. I am writing to encourage and support that this plan is seen through. It is now the year 2000 and we must do what is best for the **people** of this great country.

Keep in mind that more than 75% of the state of Wyoming is available for leasing. I don't know about you but I see a big population increase in the future of Wyoming. By seeing this plan through you would only be helping to progress our economic future. Environmentalists may disagree and may argue for the preservation of the greater Yellowstone ecosystem. However, keep in mind that the Yellowstone ecosystem consists of 18 million acres. That is 17,800,000 acres that will be left untouched when this plan goes into effect.

I hope you will seriously consider the points that I have expressed to you. The future of this country is in our hands. Let's see it through. I eagerly wait for a response to this topic. Good luck!

1

Respectfully yours,

Jonathan D. Dewez

LETTER 106

NANCY RENO
P.O. Box 598
Pinedale, Wyoming 82941
307-367-6870

February 2, 2000

Bureau of Land Management
P.O. Box 768
Pinedale, Wyoming 82941

Gentlemen:

With regard to the draft environmental impact statement:

Any drilling that has significant environmental impact should not be permitted.

1

Very truly yours,

Nancy Reno