

Section 3. Administrative Requirements And Conditions of Approval.

Implementation of the Pinedale Anticline Project will be subject to the following administrative requirements and conditions of approval:

• Authorizing Actions

The Pinedale Anticline Operators are responsible for obtaining all necessary federal, state, and county permits, and for implementing the Pinedale Anticline natural gas exploration and development project in an environmentally responsible manner (see Appendix A, Table 1, Federal, State, and Local Permits, Approvals and Authorizing Actions Necessary for Construction, Operation, Maintenance and Abandonment of the Pinedale Anticline Natural Gas Development Project).

• Mitigation and Monitoring

All practicable means to avoid or minimize environmental harm have been identified and provided through the adoption of the RP Alternative on Federal Lands and Minerals. The additional opportunities identified in the EIS to mitigate impacts, which are brought forward into this ROD, are listed in Appendix A, Section A-3A. Measures not adopted, with a brief explanation of why, are also listed in Appendix A, Section A-3C.

The Pinedale Anticline Operators shall implement the Mitigation Guidelines and Standard Practices for Surface-Disturbing and Disruptive Activities found in Appendix A. This includes:

- Section A-1 Mitigation Guidelines;
- Section A-2 Standard Practices (Best Management Practices) and Guidelines for Surface Disturbing Activities;
- Section A-3A Required Mitigation and Monitoring on Federal Lands and Minerals [Mitigation and Monitoring Opportunities Brought Forward from the Pinedale Anticline EIS];
- Section A-4 Environmental Analysis and Mitigation of Oil and Gas Development and Other Surface Disturbing Activities - The Tiered Approach;
- Section A-5 Erosion control, Revegetation and Restoration Plan Guidelines; and
- Section A-6 Procedures for Processing Applications in Areas of Seasonal Restrictions.

Monitoring inspections conducted by BLM and the Operators will be based upon the parameters identified in Appendix A.

The BLM and each Operator (individually or jointly) will designate an individual to serve as their Environmental

Compliance Coordinator, for quality assurance/quality control, who will be responsible for assuring that, during the life of the project, mitigation measures are applied and monitoring activities are conducted as necessary to ensure impacts are minimized, necessary remedial action is taken, etc.

An Oversight Work Group (Operators, landowners, livestock Operators, and other affected/interested parties, and BLM), under the framework of the Adaptive Environmental Management (AEM) process, will review the implementation of construction and rehabilitation operations through a minimum of an annual field inspection to ensure that the mitigation measures are reasonable and effective.

Additional opportunities to mitigate residual impacts identified in the draft and final EIS will be implemented where and when applicable (Appendix A). Opportunities include: coordination of road-pipeline construction to use existing roads as joint road-pipeline corridors where feasible and where the amount of surface disturbance is reduced over conventional gathering pipeline installation practices; road and trail reclamation/closure to restore wildlife habitat by ripping and seeding numerous two-tracks and unneeded primitive roads; reducing the extent of surface disturbance associated with well pads, access roads, and pipeline corridors but within safety standards; maximizing the success of reclamation and restoration of wildlife habitat by consulting with reclamation contractors and oil and gas Operators for reclamation practices successfully applied in the Pinedale Anticline Project area.

• Adaptive Environmental Management Process and Monitoring

Plans and activities seldom proceed as originally planned due to scientific and other uncertainties. Therefore, comprehensive monitoring must be provided of project implementation and of the effects of implementation. Information gathered from this monitoring will guide mid-course corrections in adapting to the inevitable changes which will occur because of the new information. To assist this comprehensive monitoring program, an *Adaptive Environmental Management* (AEM) Process will be designed and implemented in accordance with the guidelines provided in Appendix C. The AEM process will function as an umbrella oversight working group for the implementation, monitoring and enforcement programs adopted for the PAPA to assure that the decisions and required mitigation measures are carried out; to inform cooperating agencies on progress in carrying out mitigation measures; and to make available to the public the results of relevant monitoring. This AEM process is provided for under the Council on Environmental Quality Regulations 40 CFR 1505.2(c); 1505.3.

The AEM process will involve the participation of technical agency personnel (e.g., U.S. Fish and Wildlife Service, USDA-Forest Service, Wyoming Game and Fish Department, Wyoming Department of Environmental Quality - Air Quality and Water Quality Divisions, State Engineer, Sublette County, Town of Pinedale, University of Wyoming, and others) and a group of affected and interested public (e.g., Oil/Gas Operators, environmental groups, landowners, livestock Operators, and others). The technical agency group will draft the various monitoring plans and other management documents. The public group will review the plans for adequacy and recommend where additional monitoring may be necessary before any of the plans are implemented.

Specific monitoring plans that shall be developed by the technical agency group are: wildlife - mule deer, antelope, sage grouse, and T/E listed, proposed, candidate, and species of special concern; water quality - New Fork River and livestock water wells; reclamation - site recontouring, seeding, revegetation success; transportation - construction and maintenance of roads, well pads, and pipeline installation; cultural/historic - complete an annual report on the context of the archeological and historic resources discovered during development; and air quality - tracking actual on-the-ground calculated potential NO_x emissions for air quality visibility. All monitoring, except for the tracking of NO_x emissions, will be cooperatively funded by the Oil/Gas Operators and the agencies participating in the technical agency work group.

• Site Specific Environmental Analysis

Before authorization of individual actions on public lands (e.g., APD, SN, ROW, TUP), the final location for each well pad, access road, gathering pipeline segment, CPF, compressor or other facility will be determined following a site specific environmental assessment in accordance with the BLM National Environmental Policy Act Handbook (H-1790-1). Documentation will be on BLM Form WY-1792-08.

• Plans/Reports

Authorization of multiple or single actions (e.g., road construction, well pad construction and drilling, pipeline construction, production facility installation) will require the responsible Operator to prepare and submit various applications/plans/reports to the BLM Pinedale Field Manager. The application/plan/report may cover planned multiple field actions (e.g., CPF for 8 existing wells and 8 to 16 new wells) or cover a single field action for one well pad or access road. These applications/plans/reports will serve as the Operator's field operations guide, a copy of which will be kept on-site and in the office of the Operator. The applications/plans/reports are as follows:

- Application for Permit to Drill (APD);

- Right-of-way Application;
- Transportation Plan (Appendix B) - Survey/ road Design;
- Spill Prevention Control and Countermeasures Plan (SPCC Plan) (Appendix A & E);
- Reclamation and Monitoring Plan (Appendix A, Section A-2 and A-3A);
- Cultural Clearance Reports (Class I/III) (Appendix A);
- Storm Water Pollution Prevention Plan/Erosion Control Revegetation Restoration Plan (Appendix A, Section A-5);
- Visual Simulation in Sensitive Viewsheds.

• Transportation Plan/Transportation Planning Committee

A Transportation Plan has been prepared for the Pinedale Anticline Project Area (Appendix B). The Plan describes the procedures by which transportation planning, road design, construction, and road maintenance will be conducted by the Pinedale Anticline Operators to meet their operational needs and BLM requirements for road standards, safety, and resource protection. Guidance on the content and processes for Transportation Planning and road standards have been developed in accordance with the BLM 9113 Road Standards Manual and the Green River Basin Advisory Committee recommendation.

Transportation Planning Committee (TPC). A TPC was established for both the Pinedale Anticline and the Jonah Projects on November 18, 1999. A Memorandum of Understanding (MOU) has been prepared to formalize the working relationship between all parties participating in the TPC. The TPC has the purpose and responsibility to: 1) provide transportation (roads and pipelines) planning oversight for the Pinedale Anticline and Jonah Projects; 2) provide identification of and consideration for environmental and local needs, issues and concerns; 3) formulate and recommend potential solutions and implementation strategies; and 4) evaluate monitored results of approved solutions.

Subcommittees may be established as necessary to address and recommend resolutions for site-specific issues (e.g., operational/compliance issues; individual road maintenance and/or construction problems). The TPC does not have authority to require or to implement any specific action, solution, or strategy. It can only make recommendations to the responsible authority (i.e., BLM for actions/solutions affecting BLM-administered lands; Sublette County Commissioners for actions/solutions affecting County roads, ordinances, etc.; State of Wyoming for actions/solutions affecting State Lands, State Law or Regulations, etc.; Wyoming Department of Transportation (WYDOT) for actions/solutions affecting State Highways; etc.).

The MOU identifies several areas of cooperation including the following:

- All parties agree to meet at least twice a year to discuss transportation related issues. One of the required meetings shall be held between mid-January and 1st of February of each year. Meetings may be held more often if agreed to by the committee.
- The TPC will review general road and pipeline transportation plans. Not every road, pipeline, or access road associated with an Application for Permit to Drill (APD) will be passed before the TPC. If there is an issue associated with a proposed road, pipeline, APD access road or other right-of-way, the TPC will conduct a review and recommend a solution.
- The Oil/Gas Operators will present their drilling, road, pipeline, and other construction plans to the TPC during the annual meeting (mid-January – February 1st).

Transportation planning for the Pinedale Anticline Project Area will be an on-going activity and will incorporate consultation with the established Transportation Planning Committee (TPC).

The TPC will conduct an annual on-the-ground review of Operator well and access road development plans. The review will entail assessment of existing roads and how the planned incremental well development roads tie in with the existing network to ensure safety and protection of natural resource values. As individual applications (APDs, SNs, ROWs, and/or TUPs) are prepared for submission to BLM following on-site inspection, site-specific consideration will be given to safety and environmental protection in access road location, design, construction, and maintenance in accordance with the guidance of the *Transportation Plan for the Pinedale Anticline Area*.

• Road Maintenance Agreements

The Pinedale Anticline Operators will utilize an extensive network of existing and new roads in the Pinedale Anticline Project area and the adjacent Jonah Project area. *Collector Roads* (County and BLM roads) and some of the *Local Roads* are shared by the field Operators. To ensure that appropriate maintenance of these roads occurs, *road maintenance agreements*, which will provide for the shared cost of road maintenance, will be drawn up and signed by all affected Operators. Agreements could be zoned according to the following areas:

1. South Pinedale: U.S. Highway 191 to Green River (Co. 23-110) - Mesa North - Twin Bridges Road.
2. Mesa Top: Wyoming Highway 351 to Green River (Co. 23-110) - Mesa (BLM 5105 and 5102) - Crest Road.
3. South Mesa: Wyoming Highway 351 to Paradise Road (Co. 23-136) - Crest Road.
4. South New Fork River: Wyoming Highway 351 to Pipeline Road - Boulder South Road (Co. 23-106).
5. South Wyoming Highway 351 to Jonah: Wyoming Highway 351 to Jonah North Road (BLM 5410) - Jonah

Field.

6. South Anticline Crest Road: U.S. Highway 191 to the Jonah North Road.

• Air Quality

All air pollutant emissions from federally authorized development within southwest Wyoming, including the Pinedale Anticline Project, Continental Divide, Jonah II, Fontenelle, Moxa Arch, and Stagecoach Draw shall comply with all applicable local, state, and Federal air quality laws, statutes, regulations, and implementation plans. The air quality analysis conducted for the Pinedale Anticline EIS updates the Pinedale, Kemmerer, and Green River RMPs and southwest Wyoming air quality evaluation on a cumulative basis for the region.

Emissions Control. Air pollutant emissions from operation of the Pinedale Anticline development project were based upon the analysis assumptions contained in the *Pinedale Anticline EIS and Technical Report (CALMET/CALPUFF Modeling)*. Also, included by reference are the Operator permit requirements for construction, modification and operation of existing, new, and modified oil and gas production units under Wyoming Department of Environmental Quality, Air Quality Division, *Oil and Gas Production Facilities Chapter 6, Section 2 Permitting Guidance, revised January 2000*. If activity and corresponding emission assumptions and/or impacts exceed those identified in the Pinedale Anticline EIS (376.59 tons/year of NO_x emission from compressors or 693.5 tons/year NO_x emissions from the combination of construction/drilling, well production, and compression), the BLM, in cooperation and consultation with Wyoming Department of Environmental Quality-Air Quality Division (DEQ-AQD), EPA Region VIII, USDA-Forest Service, and other affected agencies, will undertake additional cumulative air quality environmental review as required by CEQ regulations 40 CFR 1502.9(c)(1)(ii).

Each compressor engine undergoes Best Available Control Technology (BACT) review by WDEQ. The appropriate controls will be determined as part of the air quality preconstruction evaluation and permitting process required by the WDEQ.

The BLM, however, offers to Wyoming DEQ for their consideration in permitting facilities having NO_x emissions within the Pinedale Anticline project area the mitigation measures below. The BLM recognizes that the implementation of some of the mitigation measures may be outside the Wyoming DEQ's regulatory authority.

- Total NO_x emissions should be kept below 693.5 tons/year to ensure that permitted emissions do not exceed the Pinedale Anticline EIS scope of analysis.

- The control of NO_x emissions at or below 693.5 tons/year could be achieved in a number of ways including but not limited to:
 - ▶ Establishing BACT at 0.7 grams/hp-hr for compressor engines.
 - ▶ Denying additional permits once the threshold is reached until additional environmental review has been completed in accordance with NEPA.
 - ▶ Using other new technologies as they become available.

Operators can reduce the amount of emissions associated with compression by using larger diameter pipelines and adopting new emissions control technology as it becomes available.

Status of Visibility “Level of Concern”. The agencies (Wyoming DEQ, EPA, USDA-Forest Service, and BLM) agree that the “levels of concern” (977 tpy NO_x emissions for southwest Wyoming and the 158.6 tpy NO_x emissions for the Jonah II project area, above levels existing January 1, 1996) are no longer meaningful. Their derivation was based upon the ISCST3 screening model, a less sophisticated method of predicting air quality impacts than the modeling system currently being used in BLM EISs. Since that time, additional modeling analysis has been completed for the Pinedale Anticline EIS (November 1999) which utilized the more sophisticated and realistic, agency agreed upon, CALMET/CALPUFF model.

Based upon the improved modeling, reductions in nitrogen oxide emissions at the Naughton Power Plant near Kemmerer, and the timing, duration, and magnitude of visibility impacts from the projected wells and compression, the cumulative effects of nitrogen oxide emissions (as modeled for the Pinedale Anticline Project EIS) will remain below visibility and lake acidity thresholds. Monitoring and emissions tracking for the protection of wilderness air quality related values of visibility and lake acidification will continue and reporting will be done on an annual basis.

Atmospheric Deposition Impact Mitigation. No additional air quality mitigation shall be required to reduce potential atmospheric deposition in high mountain lakes with low acid neutralizing capacity (ANC). The Wyoming DEQ-AQD should continue to encourage offsetting or reducing NO_x emissions from proposed or existing activities when permitting new emission sources or processing permit renewals under Wyoming Air Quality Standards and Regulations within southwest Wyoming.

Air Quality Mitigation Program. No additional air quality mitigation shall be required to further reduce potential air quality impacts. The Wyoming DEQ-AQD currently requires Best Available Control Technology (BACT) be applied in all air quality permits. Wyoming DEQ-AQD requires that a site-

specific BACT analysis be conducted by the proponent as part of its pre-construction permit application. This long standing requirement is a technology forcing regulation which will help mitigate potential NO_x emission impacts.

Air Quality Monitoring/Tracking Program. At this time, no additional air quality monitoring measures have been identified as necessary to measure potential air quality impacts. As deemed necessary under Section 6 of the oil and gas lease terms, BLM may require the lessee, within their lease rights granted, to take measures deemed necessary in the conduct of their operations to minimize adverse impacts to the air, as well as other resources. The BLM will continue to cooperate in the implementation of existing visibility and atmospheric deposition impact monitoring programs. The need for and the design of additional monitoring will include the involvement of the AEM process (Appendix C). Based upon recommendations through the AEM process, Operators may be required to cooperate in the implementation of a coordinated air quality monitoring program.

The WDEQ-AQD emissions tracking will continue, on an annual basis, to report changes in permitted potential NO_x emission levels since January 1, 1996. In accordance with the Joint Agreement (in process) between the BLM, Wyoming DEQ, USDA-Forest Service, and the Environmental Protection Agency, in maintaining diligence in the monitoring for the protection of wilderness air quality related values of visibility and lake acidification, the BLM, in consultation with the Wyoming DEQ-AQD, will track emissions for the Pinedale Anticline and the Jonah II projects on an annual basis.

Beginning in December 2000, because of their proximity to the Bridger Wilderness boundary, the Pinedale Anticline and Jonah II projects will be monitored individually, in addition to the BLM Rock Springs, Pinedale, and Kemmerer Field Offices report, on an annual basis. The BLM will track and report on actual on-the-ground calculated potential NO_x emissions (i.e., the level of NO_x emission from permitted, actually constructed/installed facilities based upon the permitted level of emissions per well location, compressor facility, etc.) for the Jonah II and Pinedale Anticline project areas.

The agencies agree that through continued use of the CALPUFF model in future EISs, cumulative emissions impacts will continue to be assessed in southwest Wyoming for each additional significant emissions source on Federal lands. The CALPUFF model is a more accurate and meaningful predictor than previously used models of potential impacts to wilderness air quality related values, such as visibility and lake acidification.

This agreement among the agencies will remain in effect until an information source provides recommendations, with

supporting technical analysis regarding regional visibility or lake acidification impacts, that the tracking of NO_x emissions should be revised or eliminated. The agencies will review the technical analysis and agree on the appropriate change.

- **Special Status Species**

The U.S. Fish and Wildlife Service (USFWS) concurs in the assessment that the project, as described, is not likely to adversely affect the listed species - black-footed ferret, bald eagle, whooping crane, or Canada lynx; nor is it likely to jeopardize the proposed mountain plover, or the candidate swift fox, **provided** the reasonable and prudent protective measures and the surveys, pursuant to the USFWS Survey Guidelines described in Appendix A (Section A-2, pages A18 through 21; Section A-3, pages A-30 through 32) are implemented/conducted.

If the scope of the project is changed (i.e., the project is modified in a manner that may result in an effect to listed, proposed, candidate, or migratory bird species or their habitat, including black-footed ferret habitat, raptor nests, and mountain plover nesting habitat), the BLM will re-initiate Section 7 Consultation under the Endangered Species Act (ESA). Any measures developed through this consultation will be implemented by the Operators. The BLM is responsible to ensure compliance with the ESA.

Endangered Fish - The USFWS has determined that any withdrawal of water from the Colorado River System (surface or ground water) will jeopardize the endangered Colorado pikeminnow, humpback chub, bonytail, and razorback sucker. The USFWS has determined that the reasonable and prudent alternative is for the proponent to contribute to the conservation fund for the Colorado River Fish program. The USFWS Colorado River Endangered Fish Recovery Program uses the contributions to improve habitat for these species. The fee is required for each acre-foot of water depletion once the depletion of water is in excess of 100 acre-feet from the Colorado River system. It is estimated that the PAPA will require 3.2 acre feet of water use per well (for construction, well drilling, dust abatement, etc.) and that the average annual number of wells drilled would be 90 wells or 288 acre-feet of water use. The current depletion rate (July 2000), which is adjustable based on inflation, is \$14.36 per acre-foot. Therefore, the PAPA Operators will be required to submit a payment of \$4,135.68, by certified check or money order, to the National Fish and Wildlife Foundation, 11230 Connecticut Ave., N.W., Suite 900, Washington, D.C., 20036.

Mountain Plover (proposed for listing) - The mitigation measures described in Appendix A, pages A-20 and 21 will be implemented. If during the life of the project the mountain plover should become listed as an endangered or threatened species, and if the project may affect the plover, the BLM will initiate consultation with the USFWS. If formal consultation is necessary, all reasonable and prudent measures specified

by the USFWS will be required and implemented by the Operator and his contractors.

Bald Eagles - Bald eagles roost, perch, feed, and nest along the Green River and New Fork Rivers. The reasonable and prudent measures described in Appendix A, pages A-19 through 20 will be implemented. These measures include the requirement that no permanent (life of the project), project related, high profile structures will be located within 2,600 feet of a bald eagle nest. Well pads will be located so that they are at least 2,600 feet from a bald eagle nest. Wells that must be located closer than 2,600 feet (but will not be allowed closer than 2,000 feet) of a bald eagle nest will be out of the direct line of sight of the nest; will have no human activity at the well site from February 15 through August 15 except in the case of an emergency; and will locate production facilities off-site or at a central production facility location at a distance of 2,600 feet or more from the nest.

Black-Footed Ferret (listed) - The reasonable and prudent measures described in Appendix A, page A-21 will be implemented. Proposed construction sites in the development area will be examined prior to surface-disturbing activities to confirm the presence or absence of prairie dog colonies, colony/complex size, burrow density, and any other data to indicate whether the criteria for black-footed ferret habitat, established in the USFWS (1989) guidelines, are present. If prairie dog colony/complex meets the USFWS criteria, a qualified biologist will locate all project components to avoid direct, indirect and cumulative impacts to the colony/complex. If this is not practical or possible, black-footed ferret surveys of the prairie dog colony/complex, where required by the USFWS, will be conducted in accordance with USFWS guidelines and requirements. The results of the survey will be provided to the USFWS in accordance with Section 7 of the ESA, as amended, and Interagency Cooperation Regulations. If a black-footed ferret or its sign is found during the survey, the BLM Authorized Officer shall stop all action on the application in hand, and/or action on any future application that may directly, indirectly, or cumulatively affect the colony/complex, and initiate Section 7 review with the USFWS. No project-related activities will be allowed to proceed until the USFWS issues their biological opinion. The USFWS biological opinion will specify when and under what conditions and/or prudent measures the action could proceed or whether the action will be allowed to proceed at all.

- **Raptor Nest Protection**

The Mitigation Guidelines and Standard Practices specified in Appendix A, Section A-1, pages A-2 and 3; Section A-2, pages A-19 and 20; and the mitigation brought forward from the EIS into Appendix A, Section A-3, pages A-30 and 31 will be implemented to protect raptors and raptor nesting.

To ensure protection of raptor species, all surface-disturbing or human activity associated with construction, including roads, pipelines, well pads, drilling, completion, or workover operations, will be seasonally and location restricted pursuant to the Standard Practices described in Appendix A. As the Standard Practices specify, a buffer zone will be maintained around *active* raptor nests to ensure that the future function of raptor nests and raptor recruitment of young are not adversely compromised. The buffer distance may vary depending upon the species involved, prey availability, natural topographic barriers, and line-of-sight distances. Linear disturbances, such as pipelines, seismic activity, etc., could be granted exceptions as long as they do not adversely affect raptors and they have no long-term activity associated with them which could impact nesting success.

- **Sage Grouse Protection**

The Mitigation Guidelines and Standard Practices specified in Appendix A, Section A-1, pages A-2 and 3; Section A-2, page A-19; and the mitigation brought forward from the EIS into Appendix A, Section A-3, pages A-32 through 33 will be implemented to protect sage grouse breeding and nesting activity and habitat.

To ensure protection of sage grouse, all surface-disturbing or human activity associated with construction, including roads, pipelines, well pads, drilling, completion, or workover operations, will be seasonally and location restricted pursuant to the Mitigation Guidelines and Standard Practices described in Appendix A.

Lek Protection. Lek protection will be maintained by avoiding surface disturbance within 0.25 miles of a sage grouse lek (strutting ground). Linear disturbances such as pipelines, seismic activity, etc., could be granted exceptions because they would not have long-term activity associated with them which could impact nesting success. In selecting a new site for a compressor facility or other long-term facility causing an increase in noise, the distance from the edge of a sage grouse lek shall be sufficient to limit any increased noise at leks during their use period to no more than 10 decibels (dBA) above background (i.e., 39 dBA background + 10 dBA = 49 dBA).

Field evaluations for sage grouse *leks* will be conducted by a qualified biologist provided by the BLM or WGFD, or a BLM approved biologist provided by the Operator, prior to the start of activities in potential sage grouse lek habitat from March 1 through May 15. These field evaluations will be conducted if project activities will occur in potential sage grouse lek habitat during the specified period. BLM wildlife biologists will ensure that such surveys are conducted using proper survey methods at the proper time of year. Unless granted an exception by the Authorized Officer, Operators will avoid all drilling and construction activities during the

sage grouse strutting period (March 1 through May 15) on areas within 1.0 mile of active leks.

Nesting Protection. Field evaluations for sage grouse *nesting* will be conducted from April 1 through July 31 by a qualified biologist provided by the BLM or WGFD, or a BLM approved biologist provided by the Operator, prior to the start of activities in potential sage grouse nesting habitat. To avoid displacing nesting sage grouse, construction activities proposed within a two-mile radius of active leks will be avoided from April 1 through July 31, or as specified by the BLM AO. Field evaluations will be conducted if project activities will occur in potential sage grouse nesting habitat during the specified period. In areas where active nesting has been located, an appropriate buffer area will be established to prevent direct loss of the nest or indirect impacts from human-related disturbance. The appropriate buffer distance will vary, depending on topography, type of activity proposed, and duration of disturbance. If an occupied sage grouse nest will be adversely affected by surface disturbing activities, surface uses and activities will be delayed in the affected area until nesting is completed.

- **Big Game Crucial Winter Range Protection**

The Mitigation Guidelines and Standard Practices specified in Appendix A, Section A-1, pages A-2 and 3; Section A-2, pages A-18 through 20; and the mitigation brought forward from the EIS into Appendix A, Section A-3, pages A-32 and 33 will be implemented to protect big game and their habitat.

To ensure protection of wintering big game, all surface-disturbing or human activity associated with construction, including roads, pipelines, well pads, drilling, completion, or workover operations, will be seasonally and location restricted pursuant to the Mitigation Guidelines and Standard Practices described in Appendix A. To protect important big game winter habitat, activities or surface use will not be allowed from November 15 through April 30 within certain areas encompassed by the authorization. The same criteria apply to defined big game birthing areas from May 1 through June 30. The BLM can and does grant exceptions to seasonal restrictions if the wildlife biologist, in consultation with the WGFD, determines that granting an exception will not jeopardize the population being protected. Wildlife biologists use a set of criteria when considering a request for an exception. These are described in Appendix A, Section A-6, Procedures for Processing Applications in Areas of Seasonal Restrictions.

- **Water Resources Protection/Monitoring**

The Mitigation Guidelines and Standard Practices specified in Appendix A, Section A-1, page A-2; Section A-2, pages A-15 through 18; and the mitigation brought forward from the EIS into Appendix A, Section A-3, pages A-25 and 27 will be implemented to protect surface and ground water.

All reserve pits are to be lined, unless an exception is granted by the AO, to avoid migration of pit fluids beyond the pit. The Operators are encouraged to haul fluids from one pit to the other as much as is practical, instead of using fresh ground water. The goals are to reduce the amount of fluids needing to be disposed of and to conserve freshwater. BLM may, on a case-by-case basis, require that fracturing flow back fluids be contained in tanks and disposed of in an approved off-site location if unacceptable impacts would occur if it was disposed of in the reserve pit. In any case, all fracturing fluids and condensate fluids are to be contained in the reserve pit and not allowed in the flare pit or the surrounding area. This is required to prevent unnecessary impacts on vegetation and soils.

Surface Water Monitoring - The operators north of Wyoming Highway 351 will develop a surface water monitoring program in cooperation with the State of Wyoming and the BLM. The monitoring program will be reviewed with the public during the annual AEM development review. The purpose of the surface water monitoring program will be to establish baseline conditions in the New Fork and Green Rivers which are currently included in Table E of the State of Wyoming's 303(d) program. The State of Wyoming has already initiated monitoring on these streams and will show whether the streams are currently supporting their designated uses. The monitoring program must be designed to verify that the rivers do or do not continue to support their designated use. If this information is not established, the operator's could be pointed to as the cause of the impaired water when, in fact, it could result from other sources. In addition to chemical components, the monitoring program should include channel conditions near culverts and long-term effects of surface disturbance on erosion in the PAPA.

● **Water Well Protection/Monitoring**

The Mitigation Guidelines and Standard Practices specified in Appendix A, Section A-2, page A-17 and the mitigation brought forward from the EIS into Appendix A, Section A-3, page A-25 through 26 will be implemented to protect ground water and existing and future water wells.

Operators drilling gas wells through water zones used for livestock water wells will be required to protect these zones. These measures are necessary to prevent potential drainage, drawdown and contamination from other aquifers. All natural gas wells will be cased and cemented to protect subsurface mineral and freshwater zones. Unproductive wells and wells that have completed their intended purpose will be properly abandoned and plugged using procedures identified by the Office of State Oil and Gas Supervisor, Rules and Regulations of WOGCC and the BLM.

BLM recommends that when the Wyoming State Engineers Office and/or Wyoming Oil and Gas Conservation

Commission permits any water supply wells drilled by the Operators within 1,000 feet of an existing stock or domestic well, they specify that the wells production zone (perforated interval) be at least 200 feet below that of the domestic well. BLM also recommends that the permit specify water supply well seal off the upper aquifers (up to 500 feet) that supply water to the livestock wells to avoid drawdown and potential contamination of that water supply.

Water Well Monitoring - The operators will conduct a survey and a complete water analysis (e.g., static water level, alkalinity, salinity, benzene, oil, etc.) of all water wells within a 1 mile radius of existing and proposed development, and annually monitor and maintain a complete record of water analysis for all new water supply wells drilled in the project area to evaluate the quality of source options in the event some mitigation is required. The deeper groundwater supply used as drilling water has a somewhat higher salt content than existing domestic and stock wells, particularly in the southern part of the PAPA. Records will be submitted annually in accordance with the monitoring plan. The monitoring program will be reviewed with the public during the annual AEM review.

The groundwater monitoring program may follow the one currently being conducted by Ultra and the Mesa livestock operators, but will be developed to include the entire project area. The monitoring program will be designed by a qualified hydrologist and the results reported annually during the annual development review. The groundwater monitoring program will include routine measurement of groundwater levels in existing stock wells and groundwater quality to insure that wells are not being impacted (drawdown of water table and degradation of quality) beyond their intended use as a result of the proposed project.

● **Paleontological Values Protection**

The Standard Practices specified in Appendix A, Section A-2, page A-16 and the mitigation brought forward from the EIS into Appendix A, Section A-3, page A-25 will be implemented to protect paleontological values. To avoid unnecessary and undue impacts to the paleontology resource workers should be informed of the potential for encountering fossils and what steps to take if they do. It is illegal to remove any vertebrate fossil from public lands without a permit. This should be explained to workers so they will not inadvertently break the law.

● **Soils Protection/Reclamation/Monitoring**

The Mitigation Guidelines and Standard Practices specified in Appendix A, Section A-1, page A-2; Section A-2, pages A-13 through 15; and the mitigation brought forward from the EIS into Appendix A, Section A-3, pages A-27 through 29 will be implemented to protect soils and provide for proper reclamation. Surface disturbance will be kept to a minimum.

Reclamation success depends upon many site specific factors. Reclamation will be applied as specified in Appendix A-2 and A-3, including the seed mixes on pages A-27, 28, and 29. BLM may require that Operators collect certain soil chemistry information and include it in their applications on a case-by-case basis. Erodible or hard to revegetate soils should not be disturbed any more than absolutely necessary.

Project related travel is restricted to constructed, surfaced roads when soils are saturated and rutting could occur to avoid compacting the soil and accelerating soil erosion.

Sandy soils will be avoided. These soils are highly erosive, difficult to revegetate, contain buried cultural material, and support tall sage brush which is important sage grouse wintering habitat.

Soils Stabilization/Revegetation Monitoring - The operators, in cooperation with the BLM, will conduct inspections of the revegetation efforts after the second and fourth growing seasons to evaluate success. The need to reseed, fertilize or spot treat will be determined by the operator and the BLM. Successful revegetation will be based on the ability of the vegetation to stabilize reclaimed sites and to provide livestock and wildlife forage. If reseeding is judged to be necessary, based on vegetation density and composition of adjacent areas, the erosion control, revegetation, restoration plan(s) should be reviewed for any necessary changes to improve revegetation success. Results of the monitoring efforts will be presented at the annual meeting.

The reclamation monitoring program shall include written documentation of the effectiveness and success of reclamation. The Operators will monitor their reclamation to ensure that revegetation meets accepted standards (e.g., 50 percent of predisturbance cover at 2 years and 80 percent at 5 years, or other standard developed specifically for the environment of the Pinedale Anticline Project area by the Pinedale Anticline AEM Oversight Committee).

In accordance with Executive Order 13112, if invasive or non-native species infest disturbed sites, they will be controlled by mechanical, chemical, biological or other methods which are approved by BLM and the local weed control agency. Herbicide use will be avoided in all areas near water and special status plant populations.

- **Vegetation Protection/Reclamation/Monitoring**

The Standard Practices specified in Appendix A, Section A-2, pages A-12 and 13, and the mitigation brought forward from the EIS into Appendix A, Section A-3, pages A-29 and 30 will be implemented to protect vegetation and to ensure proper restoration of disturbed areas to predisturbance as near as practical. Vehicular traffic will be limited to the running surface of roads and well locations as authorized in

APD's and ROW's. This is required to prevent undue impacts to vegetation, avoid soil compaction and accelerated erosion. Traffic on two-track roads and trails is not authorized except for the staking of new locations and access roads.

Vegetation Reclamation Monitoring - The same monitoring program described for soils will be applied to vegetation reclamation. BLM and the Operators will monitor reclaimed areas to assure successful reclamation occurs.

- **Noise and Odor**

The Standard Practices specified in Appendix A, Section A-2, page A-18 and the mitigation brought forward from the EIS into Appendix A, Section A-3, page A-25 will be implemented to reduce noise and odor concerns. All new compressor engines/compressor exhaust stacks are to be muffled to reduce noise. Dwellings in the project area at Pinedale and along the Green and New Fork Rivers and sage grouse breeding success can be adversely affected by noise exceeding background levels. New compressor engines/compressor exhaust pipes shall be muffled and pointed away from the direction of any dwelling or sage grouse lek and may require additional muffling or noise buffering to reduce the noise generated by the compressor engines. In selecting a new well site or compressor site, the distance from a dwelling or a sage grouse lek shall be sufficient to result in no noise level increase from operating facilities at the dwelling and shall not result in an increase greater than 10 decibels (dBA) above background (i.e., 39 dBA background + 10 dBA = 49 dBA) at the edge of a sage grouse lek.

- **Night Lighting**

Lights from drilling rigs and other equipment on Federal lands and minerals will be managed to minimize impacts at residences to the maximum extent possible. During drilling, lights on rigs will be shrouded and directed onto the drilling platform or floor so that lights and glare are not directed away from the drilling area. This will minimize night lighting effects and impacts to dwelling occupants, visual and recreation resources.

The BP Amoco Field Office, or any other field facility, will not be authorized exterior lighting that is motion activated. Continuous nighttime exterior lighting will be authorized for facilities only while the field facility is occupied. Exterior lights will be shrouded and directed onto the immediate facility area so that lights and glare are not projected or directed away from the facility area. This will minimize night lighting effects and impacts to wildlife, dwelling occupants, visual and recreation resources.

- **Cultural/Historical Resources Protection**

The BLM and the State Historic Preservation Officer (SHPO) will enter into a Programmatic Agreement (PA) which includes discovery plans or individual project treatment plans (Appendix E). The Operators are encouraged to concur and participate in this agreement. These plans provide direction and decisions ahead of time so that actions in the field can be carried out much quicker, especially when unexpected discoveries are made.

Cultural resources potentially affected by this undertaking will be managed in accordance with the Pinedale Anticline/Jonah project PA and its Management Plan. Until this document is completed, cultural resources will be managed in accordance with the Wyoming State Protocol Agreement for cultural resources (ratified April, 1998) and regulations contained within 36 CFR 800 pertaining to discoveries. The Mitigation Guidelines and Standard Practices for cultural/historical resource management will also apply (see Appendix A, Section A-1, pages A-3 and 4; Section A-2, pages A-16 and 17; and the mitigation brought forward from the EIS into Appendix A, Section A-3, pages A-24 and 25).

BLM will work with the Operators to minimize impacts on sensitive cultural resources and/or areas sensitive to Native Americans. Where potential impacts to these resources cannot be adequately mitigated while allowing a proposed action, the use and occupancy of these areas may be prohibited entirely.

Until the PA and Management Plan are completed, the primary means of mitigation of impacts to cultural resources is to avoid these sites. If that is not practicable, then impacts must be mitigated on a case-by-case basis or via preestablished methods. Excavation is the primary form of mitigation to prehistoric sites that can not be avoided. Unexpected discoveries will be handled on a case-by-case basis but salvage excavation will normally be required because the site has been impacted. Salvage excavation recovers what information remains and allows the action to proceed.

The BLM has consulted with the Native Americans to identify areas of importance to them as required by laws, regulations, and Executive Orders.

An educational program to inform employees about the regulations concerning cultural resource management and artifact collection is required of the Operators because of the sensitivity of the resource and laws prohibiting their disturbance and removal from public land.

Patrols by BLM will be increased to deter illegal collecting of cultural materials.

Mitigation of effects to significant historic period cultural resources will be determined subsequent to consultation with all affected and interested parties.

The Historic Lander Trail will be avoided. Surface disturbing activities will avoid areas within 0.25 miles of a trail unless such disturbance will not be visible from the trail or will occur in an existing visual intrusion area. Historic trails will not be used as haul roads. Placement of facilities outside 0.25 miles that are within view of the Lander Trail will be located to blend the site and facilities in with the background.

Because of the potential for direct impact to the Lander Trail in State Section 36, T. 31 N., R. 109 W. (this section could be developed at up to 16 well pads/square mile and direct impacts to the trail could occur because the state leases do not contain stipulations which offer protection for the trail), the BLM recommends that the State of Wyoming and BLM investigate a land and mineral exchange for this section. As of this date, there is one non-producing well pad and access road in the section. By obtaining the surface rights, the BLM could offer some protection of the trail from direct impacts, although the existing rights of the current lessee will need to be recognized. The state could replace any potential lost revenues from this section and insure presently unquantified amenities and values remain, by obtaining Federal lands and/or royalty streams through an exchange commensurate with values established and agreed upon.

In the Lander Trail viewshed (defined as up to 3 miles north of the trail and south of the trail to Wyoming Highway 351) beyond the current 0.25 mile protective buffer, the completion of a visibility analysis will be required on a case-by-case basis so that well pads, access roads and pipelines can be located on Federal lands and minerals in a manner that minimizes their visibility from the trail to the extent practicable. Visibility analysis will involve completing a visual resource contrast analysis (BLM Manual H-8431-1; Form 8400-4) and utilizing viewshed analyses, such as in Figure 3-11 of the DEIS, and/or visual simulation modeling to determine the best location to screen facilities.

If extensive development occurs within the trail viewshed (i.e., more than 4 well pads/square mile) on Federal lands and minerals, CPFs or pad drilling may be required to reduce tanks and other facilities from well locations visible from the trail.

- **Socioeconomic**

BLM will work with the Operators to plan proposed development operations such that seasonal restrictions do not impact the associated workforce. BLM will work with the Operators to facilitate year round drilling where unnecessary and undue impacts to wildlife or other resources would not occur. (See Request for Exceptions section below.)

- **Land Use**

To manage and reduce the number of roads within the project area, in consultation with the TPC and as deemed necessary by the AO, existing roads (including two-tracks) that are not needed by the Operators or other users will be reclaimed and revegetated by the Operators. Roads reduce the amount of forage available, causes accelerated soil erosion, and fragment wildlife habitat. Reclaiming unneeded roads is one way to reduce these impacts. Before recontouring and reclaiming these roads a cultural resource survey will be required.

Adequate turnouts on new crowned-and-ditched roads to provide access to existing two-tracks and other undeveloped roads will be required. Ranchers have pointed out that crowned-and-ditched roads often prevent them from accessing two-tracks with low clearance vehicles (trailers). This requirement is meant to eliminate that concern.

- **Livestock Grazing**

The Standard Practices specified in Appendix A, Section A-2, page A-21 and the mitigation brought forward from the EIS into Appendix A, Section A-3, page A-30 will be implemented to protect livestock grazing within the PAPA.

All pits containing fluids will be fenced, using wood brace posts, to keep livestock and big game from drinking any contaminated water. This requirement is meant to protect livestock and big game animals in the event that harmful substances are in the pit.

Access roads will avoid major drainages that are used by livestock operators for trailing (e.g., Lovatt Draw). No surface pipelines greater than 4 inches will be installed unless they are located along a fence or other agreed upon location. Fences that are cut to install an access road or pipeline will be rebuilt immediately upon construction completion. Cattleguards will be installed on well field roads and maintained by the right-of-way holder(s).

- **Hazardous Material**

The Standard Practices specified in Appendix A, Section A-2, pages A-22 will be implemented to protect public health and safety within the project area. All Operators will comply with the Hazardous Materials Management Policy and Procedure of the Hazardous Materials Summary in Appendix D. Portable sanitary facilities are required.

The Standard Practice for hazardous material containment on a well location and/or storage tank batteries (i.e., impervious barrier under storage tanks) to protect ground and surface water will be applied on a case-by-case basis throughout the PAPA as deemed necessary by the AO, with the following exceptions - *all wells on Federal lands and minerals within*

one mile of the New Fork or Green Rivers and any wells within 50 feet of ground water shall implement the standard practice for hazardous material containment (see Appendix A, page A-22). For these areas the Operators will be required to incorporate into the design of the containment structure, including walls and floor, a sufficiently impervious barrier (e.g., bentonite, cement, plastic liner, etc.) so that any spill or leakage will not drain, infiltrate, or otherwise escape to ground, surface, or navigable waters before cleanup is completed (i.e., within 72 hours of discovery). Exceptions to the one mile will be considered where conditions such as topography, slope, etc., preclude spills from reaching surface waters.

- **Remedial Action/Compliance Monitoring**

Appropriate remedial action will be taken by the Operators in the event unacceptable impacts are identified.

The Operators will be required to conduct monitoring of project sites and various resources in cooperation with the BLM and other affected agencies.

Each Operator will provide a qualified individual to serve as their *Environmental Compliance Coordinator*, who will be responsible for assuring that, during the life of the project, mitigation measures are applied and monitoring activities are conducted as necessary to ensure impacts are minimized.

- **Request for Exception**

A request for an exception to a seasonal restriction shall follow the Guidelines provided in Appendix A, Section A-1, "Guidance" and Section A-6, pages A-53 through 55, Procedures for Processing Applications in Areas of Seasonal Restrictions.

A request for an exception to a requirement for use of a CPF, directional drilling, or pad drilling will require the Operator to provide the following information (i.e., "A" and "B" below) with their notice of staking (NOS) or preliminary APD submission.

A. Technical/Economic Evaluation: The Operator will prepare and submit an evaluation of the technical and economic feasibility of CPF, directional drilling, or pad drilling including consideration of:

- Expected recoverable reserves,
- Multiple well drilling or CPF costs,
- Gas price,
- Payout, etc.

Upon receipt of the information, the BLM will verify the technical/economic evaluation on the basis of the information submitted by the Operator.

B. Resource Protection: Submission of exception requests will be required by the Operator with their technical/economic analysis. BLM will conduct the necessary environmental review and consultation with the Wyoming Game and Fish Department, other affected and interested public, etc., and will then make a determination as to what level of activity may be allowed.

In the event that the Operator's analysis concludes that pad drilling and/or CPF's are determined not to be technically and/or economically feasible, the Operator will include in its submission for exception consideration a description of voluntary measures (what, when, where, and how) they propose to implement to reduce impacts to the resource(s) of concern. This should include measures beyond the standard measures listed in Appendix A.

In crucial winter range areas this may include a combination of the following:

- remote control operation of well facilities to reduce daily visits to the well;
- reclamation of two-track roads on-lease and off-lease not needed for production operations, livestock grazing operations, recreation use, etc.;
- locating production facilities off the location and away from the critical resource; etc.

In the sensitive viewshed areas this may include special design measures to reduce the visual impact to Pinedale residents.

• **Authorized Officer**

The BLM Pinedale Field Manager or his/her designee is the Authorized Officer (AO) for project surface and subsurface activities on BLM-administered lands and minerals. The AO, under the Code of Federal Regulations (43 CFR 3160) for *Onshore Oil and Gas Operations*, has the jurisdiction and responsibility over all operations conducted on the Federal oil and gas lease by the operator. The AO is responsible for, among other things, assuring that all operations are conducted in compliance with the lease terms, with the regulations and that the proposed plan of operations is sound both from a technical and environmental standpoint; and that all operations are conducted in a manner which protects other natural resources and the environmental quality, protects life and property and results in the maximum ultimate recovery of oil and gas with minimum waste.

The mitigation and monitoring measures, specified in Appendix A and in this ROD, may be modified by the AO as reasonably necessary to further minimize impacts. Final mitigation and monitoring requirements will be specified by the AO after on-site inspections and input on issues and concerns by BLM, private and/or state landowner, the Operator/contractor, and other affected interests. BLM could require, as provided for in Section 6 of the lease terms, additional field studies or documentation of project sites to ensure that reclamation and other resource protection goals are met.