

APPENDIX F GEOLOGY AND MINERALS

General

Contact and coordination will be made with mining and oil and gas interest groups, such as the American Mining Congress, Northwest Mining Association, Rocky Mountain Oil and Gas Association, Independent Petroleum Association of Mountain States, and International Association of Geophysical Contractors, to investigate procedures and processes that will facilitate the exploration and development of energy and non-energy mineral resources occurring beneath the lands administered by the Forest Service, with the least impacts to surface resources.

The heritage resource value of historic mineral properties will be considered prior to approval of new mineral operations.

Reclamation will be considered satisfactory when the disturbed area has been reclaimed in accordance with surface use or operating plan requirements.

Oil and Gas Operations

All trash will be dumped into a screened trash container and hauled way to an approved landfill.

Rig stacking and storage of equipment not being used is not allowed on Federal land.

The siting of oil and gas facilities and developments in sensitive areas identified in an environmental analysis will be discouraged and possibly prohibited, especially in areas of mass failure hazard, along river bottoms or areas subject to high flooding hazard.

Avoid administrative, research, and study areas in locating oil and gas operations.

Drilling pads will be designed to divert surface water off or away from the pad to minimize erosion and water accumulation.

Closed circulation systems will be encouraged. In cases where open reserve pits for drilling operations are justified, the pits will be designed and construction to minimize potential for leakage and structural failure (including pit solidification). Reserve pit residues will be contained or removed.

Production pits are prohibited. Produced water tanks will be located to minimize the potential for contamination due to a produced water spill.

Oil and gas production facilities will be designed to contain potential oil and produced water spills.

Surface and subsurface developments will be sited, constructed, painted, and maintained to achieve minimum visual impact. Surface developments will be earth tone colors.

Fencing may be required to exclude livestock from portions of the drilling/production/reclamation areas.

If a well is a producer, all site rehabilitations (dirt moving work, seeding and fencing) shall be completed within six months. As a general guideline under normal weather conditions, the timetable for rehabilitation will allow two months for the mud to settle in the reserve pit, two

months for backfill settling upon pit closures, and two months to complete the final contouring of the land and applying topsoil. Before any production facilities are constructed, the operator will prepare site reclamation plan and Forest Service for all disturbed areas not required for production facilities. In the event of winter a freeze-up, reclamation will be put on hold as determined by the Forest Service.

If a well is a not producing, the entire location and access road (if the access is not to be retained) will be rehabilitated (dirt moving work, seeding and fencing) within six months from the date the well is plugged. The rehabilitation timetable will be the same as above.

Energy and Mineral Related Special Uses

Do not charge additional fees on permits for off-lease activities necessary to mitigate Forest Service issues when such activities are directly related to administration of a drilling permit.

Facilities including roads for development and production of mineral rights outstanding under Federal surface will be authorized under a plan of operations when located on the mineral deed, but will require a special use permit when located off the mineral patent. Appropriate charges will be made unless the road is needed as part of the Grassland's planned transportation system.

Roads built on leases being developed are considered a lease right and authorized through the drilling permit. When located off the lease, new road construction will require a special use permit and appropriate fees will be charged unless the road is needed as part of the planned Grassland transportation system.

On reserved mineral rights, a reserved minerals permit authorizes the road and pad within the boundaries of the reservation and a special use permit authorizes the off lease portion of the road. Charges for the well pad and for the portion of the road within the boundaries of the private mineral estate will be as stated in the applicable deed and Federal rules and regulations.

Noncommercial disposal of produced water from a private mineral estate under either Federal or private surface may utilize Federal surface outside the mineral patent, if it minimized overall surface or subsurface impacts on Federal land and demonstrates sound land management. No disposal fee will be charged for noncommercial produced water disposal in these cases.

Pipelines and related facilities for disposal of produced water from mineral rights reserved by Federal surface will be authorized under special use permit and the fee collection will be according to the provision in the mineral deed.

Produced Water Spills

Industry will be encouraged to prevent future produced water spills through facility design, maintenance, self-regulation and self-policing, and through the education of employees and subcontractors on the nature and severity of the problem. The Forest Service will encourage and pursue research to help mitigate this problem.

All instances of damage to Forest Service System lands from produced water generated through gas and oil exploration and production will be investigated in coordination with other appropriate Federal and State agencies.

The short-term goal of treatment will consist of establishing a grass cover within three growing season. The long-term goal will be the restoration of the area to the condition that existed prior to damage. Treatment of the contaminated soil in place is the generally preferred method.

Resource Damage from Toxic Drilling Fluids

The Grassland will coordinate investigative and corrective actions with appropriate Federal and State agencies, industry and with private consultants as needed for all cases of suspected resource damage involving the release of toxic materials from existing or abandoned drilling sites.

The Grassland will attempt to identify the cause of toxic release damage, will require correction of existing problems where feasible and will work with industry to develop methods to reduce the likelihood of future occurrence of toxic materials damage.

Mineral Rights Reserved or Outstanding

Where National Forest System surface ownership overlies mineral rights outstanding or where the mineral estate is otherwise in non-federal ownership, Forest Service land management practices and guidelines for oil and gas exploration and development will be applied to the extent allowed by deeded rights, through the application of law, and by negotiation.

In order to better facilitate mineral development activities and to minimize resource damage to NFS lands, the Grassland will, through negotiation, develop a memorandum of understanding with large holders of mineral rights outstanding.

Pipelines and related facilities for disposal of produced water from outstanding private minerals under Federal surface will be authorized by an operating plan within the boundaries of the mineral patent. No fee will be charged.

Coal development management practices and guidelines will be applied within the intent of the Surface Mining Control and Reclamation Act of 1977 and applicable State government regulations.

Locatable

Development of locatable minerals will occur according to the provisions of 36 CFR 228 Subpart A. Requirements for environmental protection will be made part of plans of operation or other approval documents.

Mineral Materials

Grassland aggregate resources may be made available for free use on the following allocation priority: Forest Service, other federal agencies, State and local agencies (36 CFR 228 Subpart C).

Mineral materials on lands managed under Bankhead-Jones may be disposed of only to public authorities and agencies (36 CFR 228 Subpart C).

Mineral material removal sites will be managed encourage safe operations, to achieve minimal environmental impacts, and to meet all the stipulations of the plans and permits/contracts. To meet this mineral material removal sites will:

- Be located so as to create the least visual impact.
- Follow the following safety provisions:
 - No vertical walls over ten (10) feet in height will be left at the end of each day's operation.
 - During periods of nonuse, including weekends, pit walls of active sites will be reduced to minimum slope of 1:1.
 - Fencing may be substituted for the above requirement.
 - Warning signs around the margins of the pit will be required when deemed necessary by the responsible Forest Officer.
- Be contoured and sloped during the period of nonuse so as to prevent soil erosion and siltation of nearby water sources.
- Be rehabilitated within 6 months of the termination of use.

Annual production reports will be required for all permits issued for a term exceeding 1 year.