

**U.S. Department of the Interior
Bureau of Land Management
Gunnison Field Office
DOI-BLM-COS060-2010-OO30-EA
Environmental Assessment of
Geothermal Lease Nomination, Gunnison County, Colorado**

**FINAL DECISION RECORD
To
Amend Geothermal Lease Stipulations in the
Gunnison Resource Area Approved Resource Management Plan**

INTRODUCTION:

The BLM, Colorado State Office received two block nominations of lands within the Gunnison Field Office for competitive geothermal leasing. One block includes approximately 4,586 acres of public lands and 400 acres of private land with federal minerals estate. The second block includes approximately 3,765 acres of National Forest Service (NFS) lands under which the Gunnison Field Office (GUFO) manages the mineral estate. Leasing of that block has been analyzed by the Forest Service, as the lead agency, in a separate Environmental Assessment.

This EA (DOI-BLM-CO-S060-2010-0030-EA) evaluated the impacts on the natural and human environment that could result from issuing leases for geothermal resources in the analysis area. In addition, the EA was prepared to determine if the previous leasing availability decision was still valid in light of new information regarding resource values in the analysis area. The analysis area for this EA included the nominated BLM and private lands and additional BLM lands within an area identified as having high potential for geothermal development.

This document describes a land use plan amendment decision, for which the Field Manager is the Recommending Official and the State Director is the Authorized Official. A companion decision was made on March 24, 2011 that determined that the nominated lands are suitable for geothermal leasing with appropriate lease stipulations.

The decision is to amend the Gunnison Resource Area Approved Resource Management Plan (RMP) to include new geothermal lease stipulations applicable to the analysis area. This will implement the Proposed Action (Alternative 1), modified by an element of Alternative 3. The nominated lands will be available for geothermal lease(s) with the stipulations described under the Proposed Action. In addition, the No Surface Occupancy lease stipulation for the protection of inactive, historic, and unknown Gunnison sage-grouse leks from Alternative 3 will also be implemented as part of the decision.

AUTHORITIES:

Geothermal leasing is a principal use of the public lands as identified in Section 102(a)(12), 103(l) of the Federal Land Policy and Management Act of 1976 (FLPMA) and is provided under Mineral Leasing Act of 1920, as amended, and Geothermal Steam Act of 1970, as amended by the Energy Policy Act of 2005. Geothermal leasing also is an appropriate use of the public lands as planned for in the Gunnison Resource Area Approved Resource Management Plan (RMP) as amended by the Record of Decision for Geothermal Leasing in the Western United States. Leases will be issued pursuant to 43 CFR 3200.

CONFORMANCE AND COMPLIANCE:

The decision has been reviewed for conformance with the Gunnison RMP. The decision is to amend the RMP. Therefore, the plan amendments will bring the proposed geothermal lease with stipulations into conformance with the RMP, as amended.

The Decision is in compliance with applicable laws, regulations, and policies, including the following:

- Migratory Bird Treaty Act and Executive Order 13186 (see section 1.5.2.1 of the EA)
- Endangered Species Act (see section 1.5.2.3, 3.2, and 3.3 of the EA)
- Clean Air Act (see section 1.5.2.10 of the EA)
- Executive Order 11988, Floodplains (see Appendix A of the EA)
- Clean Water Act (see section 3.4 of the EA)
- Federal Noxious Weed Act and Executive Order 13112 (see Appendix A of the EA)
- Executive Order 11990, Wetlands (see section 3.4 of the EA)
- National Historic Preservation Act (see section 3.6 of the EA)
- Executive Order 12898, Environmental Justice (see Appendix A of the EA)
- American Indian Religious Freedom Act (see Appendix A of the EA)
- RCRA and CERCLA (see Appendix A of the EA)
- SMCRA and Farmland Protection Policy Act (see Appendix A of the EA)
- Wild and Scenic Rivers Act (see Appendix A of the EA)
- NEPA (as supported by the documentation of this environmental analysis)

SUMMARY OF ALTERNATIVES CONSIDERED:

Proposed Action (Alternative 1):

Under the proposed action the BLM would: 1) lease the nominated lands with existing and additional stipulations; and 2) amend the RMP to include additional stipulations necessary for resource protection. BLM may modify proposed surface operations for any subsequent, post-lease applications by adding additional site-specific mitigation measures supported by site-specific NEPA analysis.

The existing stipulations are listed in the EA under section 2.2 Lease Stipulations Common to the Proposed Action and to Alternatives 2, 3, and 4. The existing stipulations are taken from the RMP or from the Record of Decision (ROD) for Geothermal Leasing in the Western US, which was amended to the RMP.

The additional stipulations to be amended to the RMP include protections of big game winter range, gullies, geologic hazards, Gunnison sage-grouse habitat during lekking season, Gunnison sage-grouse mapped summer-fall habitat, and geothermal features and senior water rights.

Applicants for geothermal development and production on public lands would develop a project-specific operations plan that incorporates the applicable mitigation and best management practices provided in relevant BLM mitigation guidance. Additional mitigation measures would be incorporated into the operations plan and into the conditions of approval or project stipulations. The operations plan would include site plans, location of facilities, wells, pipelines, transmission lines, roads, and other infrastructure

No Action - Lease With Existing Stipulations (Alternative 2):

Under this alternative, a geothermal lease would be offered with existing lease stipulations only.

Alternative 3 - Lease with Existing and Additional NSO Stipulations for All Gunnison Sage-grouse Leks and for Mapped Summer-Fall Habitat

Under this alternative the BLM would: 1) lease the nominated lands with existing and additional stipulations; and 2) amend the RMP to include additional stipulations necessary for resource protection. BLM may modify proposed surface operations for any subsequent, post-lease applications by adding additional site-specific mitigation measures supported by site-specific NEPA analysis.

The additional stipulations that would be amended to the RMP include 1) the additional stipulations described under Alternative 1, Proposed Action, and 2) additional NSO stipulations for protection of Gunnison sage-grouse leks to include leks of inactive, historic, and unknown status, and for protection of mapped summer-fall habitat.

Alternative 4 – Lease with Existing and Additional NSO Stipulations for all Occupied Gunnison Sage-grouse Habitat

Under this alternative the BLM would: 1) lease the nominated lands with existing and additional stipulations; and 2) amend the RMP to include additional stipulations necessary for resource protection. BLM may modify proposed surface operations for any subsequent, post-lease applications by adding additional site-specific mitigation measures supported by site-specific NEPA analysis.

The additional stipulations that would be amended to the RMP include 1) the additional stipulations described under Alternative 3, Additional NSO Stipulations for Gunnison Sage-grouse Leks and Habitat, and 2) an additional NSO stipulation for protection of all occupied Gunnison sage-grouse habitat. The additional Gunnison sage-grouse NSO lease stipulation would essentially be an NSO on the entire analysis area since it is all occupied Gunnison sage-grouse habitat.

Alternative 5 – Close to Leasing

Under this alternative the BLM would amend the RMP to close the analysis area to geothermal leasing. No geothermal lease would be offered.

DECISION:

The decision is to amend the Gunnison Resource Area Approved Resource Management Plan (RMP) to include the following new geothermal lease stipulations that would be applied to any geothermal leases in the analysis area. Any such leases would also include appropriate existing stipulations. BLM may modify proposed surface operations for any subsequent, post-lease applications by adding additional site-specific mitigation measures supported by site-specific NEPA analysis.

The new stipulations include: 1) those described under the Proposed Action (Alternative 1); and, 2) the NSO stipulation described under Alternative 3 for Gunnison sage-grouse leks with inactive, historic, or unknown status. The criteria for granting exceptions, modifications, and/or waivers lease stipulations to that lease stipulation have been modified from those described in the Draft EA.

See Appendix A for a complete description of the stipulations to be amended to the RMP and the criteria for exceptions, modifications, or waivers to each stipulation. Any exceptions, modifications, or waivers to the stipulations would be subject to public notice.

BLM may modify proposed surface operations for any subsequent, post-lease applications by adding additional site-specific mitigation measures supported by site-specific NEPA analysis.

Lands on which the new geothermal lease stipulations would apply:**Lease Nomination Area:**

NMPM, T.48N., R.3E., sec. 1, lots 5-10;
 T.49N., R.3E., sec. 25, E $\frac{1}{2}$ NE $\frac{1}{4}$, SE $\frac{1}{4}$
 T.48N., R.4E., sec. 5, lots 5-18,
 sec. 6, lots 8-23,
 sec. 7, N $\frac{1}{2}$ NE $\frac{1}{4}$, NE $\frac{1}{4}$ NW $\frac{1}{4}$,
 sec. 8, NW $\frac{1}{4}$ NE $\frac{1}{4}$, N $\frac{1}{2}$ NW $\frac{1}{4}$,
 T.49N., R.4E., sec. 19, SE $\frac{1}{4}$,
 sec. 20, N $\frac{1}{2}$ N $\frac{1}{2}$, SW $\frac{1}{4}$ NE $\frac{1}{4}$, S $\frac{1}{2}$ NW $\frac{1}{4}$, N $\frac{1}{2}$ SW $\frac{1}{4}$, NW $\frac{1}{4}$ SE $\frac{1}{4}$,
 sec. 29, lots 1-4, S $\frac{1}{2}$ N $\frac{1}{2}$, S $\frac{1}{2}$,
 sec. 30, lots 5-11, E $\frac{1}{2}$ SW $\frac{1}{4}$, SE $\frac{1}{4}$,
 sec. 31, lots 5-11, NE $\frac{1}{4}$, E $\frac{1}{2}$ NW $\frac{1}{4}$, NE $\frac{1}{4}$ SW $\frac{1}{4}$, N $\frac{1}{2}$ SE $\frac{1}{4}$,
 sec. 32, lots 1-4, N $\frac{1}{2}$, N $\frac{1}{2}$ S $\frac{1}{2}$.

Additional Analysis Area:

NMPM, T.48N., R.4E., sec. 4, E $\frac{1}{2}$ E $\frac{1}{2}$;
 sec. 9, N $\frac{1}{2}$ NE $\frac{1}{4}$;
 T.49N., R.4E., sec. 19, NE $\frac{1}{4}$ NE $\frac{1}{4}$, S $\frac{1}{2}$ NE $\frac{1}{4}$, E $\frac{1}{2}$ SW $\frac{1}{4}$, parts south and east of CR 887.

Geothermal Lease Stipulations Amended to the RMP

1. Big game winter range NSO¹ lease stipulation (G-15):

- No surface occupancy will be allowed in mapped elk winter concentration areas².

2. Gullies and other areas of chronic erosion NSO¹ lease stipulation (G-16):

- No surface occupancy will be allowed within 50 feet of a gully or other area of chronic erosion if adjacent and surrounding slopes are less than 30%.
- No surface occupancy will be allowed within 100 feet of a gully or other area of chronic erosion if adjacent and surrounding slopes are in excess of 30%.

3. Geologic hazards NSO³ lease stipulation (G-17):

- No surface occupancy would be allowed within identified geologic hazards, which consist of landslide deposits from the adjacent Tomichi Dome.

4. Gunnison sage-grouse (GUSG) Timing Limitation stipulations (G-20 and G-21):

- Construction or drilling activities will not be allowed in occupied Gunnison sage-grouse habitat between March 15 and May 15.
- Routine operations, maintenance, and other activities in occupied Gunnison sage-grouse habitat will be allowed between 9:00 a.m. and 4:00 p.m. during the period between March 15 and May 15. This restriction applies to human activity, and not to continuing operation of equipment and facilities, such as well pumps, power plant, and cooling equipment.

NOTE: Routine operations and maintenance are characterized as any scheduled activity that is required to preserve ongoing production and maintain existing equipment and facilities to an adequate level of service.

5. Gunnison sage-grouse mapped summer-fall habitat CSU stipulation (G-25):

- The project applicant will be required to submit a plan to meet the resource management objectives through special design, construction, operation, mitigation, or reclamation measures, and/or relocation. Unless the plan is approved, no surface occupancy would be allowed in the mapped GUSG summer-fall habitat.

¹ Does not apply to existing roads open to public vehicle use or to existing authorized facilities, such as powerlines, administrative access roads, livestock and/or wildlife water developments, fences, etc.

² Elk winter concentration areas are mapped by the Colorado Division of Wildlife.

³ Does not apply to existing roads open to public vehicle use or to existing authorized facilities, such as powerlines, administrative access roads, livestock and/or wildlife water developments, fences, etc.

6. Geothermal features and senior water rights CSU lease stipulation (CO-52):

To prevent potential material injury to senior water or geothermal rights under Colorado state law, and to ensure that existing geothermal features are protected under the terms of BLM's applicable Resource Management Plan, as amended by the Record of Decision and Resource Management Plan Amendments for Geothermal Leasing in the Western United States, 2008, as appropriate, this lease is restricted as follows.

- Monitoring of the quantity, quality, or temperature of surface or subsurface water resources by the lessee prior to and during all lease operations, including exploration, development, and utilization of a geothermal resource, may be required as directed by the BLM in consultation with the Colorado State Engineer's Office, and the burden of proof shall be on the lessee to ensure compliance with federal and state statutes, rules, and regulations.
- Material injury may be determined by the relevant Colorado Water Court, and such an order from the Water Court may result in limitations on the use of the geothermal resource.

NOTE: The lessee/operator must also demonstrate to the BLM that they have made a good faith effort to work with the owners of the Upper and Lower Waunita Hot Springs to develop an effective monitoring program. The monitoring program would be designed to determine if there are any impacts to water quality, quantity, and/or temperature of the Waunita Hot Springs during any exploration, development, and production of the lease.

7. Geothermal features and senior water rights CSU lease stipulation (G-26)

- To prevent potential material injury to senior water or geothermal rights under Colorado state law, and to ensure that existing geothermal features are protected a comprehensive geologic and hydrogeologic study, and interpretation that assesses hydraulic relationships in the area, will be required prior to the lessee/operator being approved by the BLM to operate any production or injection wells.

8. Gunnison sage-grouse lek sites NSO⁴ stipulation (G-10):

- No surface occupancy or use is allowed within a 0.6 mile radius of Gunnison sage-grouse leks of inactive, historic, and unknown status.

The purpose of this stipulation is to protect two inactive/historic leks for potential population expansion while still recognizing that it may be better to locate development near the leks in previously disturbed areas rather than in undisturbed areas of quality breeding/broodrearing habitat. However, BLM recognizes it may be of benefit to species conservation to locate development in or near previously disturbed areas rather than in undisturbed areas, regardless of seasonal habitat type. The stipulation will be applied in a flexible manner so as to focus potential development of the geothermal lease parcel in

⁴ Does not apply to existing roads open to public vehicle use or to existing authorized facilities, such as powerlines, administrative access roads, livestock and/or wildlife water developments, fences, etc.

areas that minimize cumulative impacts of surface disturbance to Gunnison sage-grouse habitat. In deliberating a waiver, modification or exception, consideration will be given to the potential cumulative impact of locating surface disturbing activities within 0.6 miles of an inactive, historic, or unknown status lek against the potential cumulative impacts of disturbing other sage-grouse habitat. Habitat protection efforts may emphasize inactive, historic, and unknown leks or may emphasize protection of other types of sage-grouse habitat.

If new leks are found after the onset of activities, there would be no increase in ground-disturbing activities or constructed features, beyond what existed when the lek was first identified, within a 0.6 mile radius of the lek. This would not apply to operation and maintenance of production facilities.

RATIONALE:

The new geothermal lease stipulations amended to the RMP would best meet the purpose and need for the proposed action. That is, applying the new stipulations would allow the BLM to make public lands geothermal resources in the analysis area available for lease in a manner that protects public land resources and resource values and mitigates impacts on other land uses while helping to meet the increasing interest in geothermal energy development.

The decision is based on the findings and analysis in the EA, including supporting documentation and reports, and participation and involvement in this project from cooperating agencies and the public. The decision includes the Proposed Action in the EA, with the addition of the NSO lease stipulation for inactive, historic, and unknown status GUSG leks from Alternative 3.

The goal of the latter additional stipulation is to protect inactive, historic, and unknown status leks for potential population expansion while still recognizing that it may be better to locate development near those leks in previously disturbed areas rather than in undisturbed areas of quality breeding/broodrearing habitat. These criteria are designed to focus development in a manner that minimizes fragmentation and disturbance footprint, and balances the impact to previously disturbed areas against undisturbed areas-regardless of habitat type. Addition of protections for the inactive, historic, and unknown status leks was supported by our cooperating agencies and by members of the public who have been actively involved in the project.

FINDING OF NO SIGNIFICANT IMPACT:

Based on the analysis of potential environmental impacts contained in the referenced environmental assessment (EA), and considering the significance criteria in 40 CFR 1508.27, a Finding of No Significant Impact (FONSI) was prepared and signed on March 24, 2011. Neither the Proposed Action nor Alternative 3 will have a significant effect on the human environment. Therefore, preparation of an environmental impact statement is not necessary. This finding is based on the context and intensity of the proposal as detailed in the FONSI.

COMPLIANCE/MONITORING:

Lease issuance alone does not authorize any ground-disturbing activities to explore for or develop geothermal resources without site-specific approval for the intended operation. There are several stages of decision making necessary to approve geothermal resource development, each with its own site-specific environmental analysis. The four stages of geothermal resource development within a lease are exploration, drilling operations, utilization, and reclamation and abandonment. Each stage requires additional site-specific environmental analysis prior to issuance of a permit from the BLM. Also at each stage, the BLM can issue site-specific conditions of approval to protect resource values. Geothermal exploration and production on Federal land conducted through leases is subject to terms and stipulations to comply with all applicable Federal and state laws pertaining to various considerations for tribal interests, sanitation, water quality, wildlife, safety, cultural resources, and reclamation. Therefore, specific monitoring of leases is not required at this time, but may be required following site-specific analysis and approvals of exploration and applications for drilling and development.

PUBLIC INVOLVEMENT AND COMMENTS

On February 3, 2010, BLM sent letters to 12 Federal and State agencies, local governments, and Tribes inviting them to be Cooperating Agencies with the BLM on the environmental analysis for the geothermal leasing proposal. The following parties agreed to be Cooperating Agencies with the BLM:

- US Fish and Wildlife Service
- Gunnison County
- Colorado Department of Natural Resources, including these agencies:
 - Division of Water Resources
 - Geological Survey
 - Division of Wildlife
 - State Land Board

Cooperating agencies are those that have special expertise and/or jurisdiction by law related to a specific proposal and/or land use planning on public (BLM) lands. The Forest Service participated with BLM in this analysis under the terms of a national-level MOU for Geothermal Leasing.

On February 24, 2010, a joint Forest Service/BLM scoping letter was sent to 125 parties, including area landowners, FS and BLM grazing and recreation permittees, various interest groups, and State and National congressional representatives. The scoping letter provided information about the proposed project, notified recipients of an upcoming public meeting, and asked for comments to be sent to the FS and/or the BLM.

On March 11, 2010 the Forest Service and BLM hosted an open-house style public meeting. Both agencies presented some basic information about the proposal and the analysis process. Representatives from the State of Colorado, Governor's Energy Office and Colorado Geological Survey also gave presentations about the State's energy conservation and renewable energy

programs, and about geothermal development in general and the potential for development in Colorado. The presentations were followed by an open house where attendees could review various maps of the analysis area and ask questions of the FS, BLM, and State agency employees. Approximately 75 people attended the public meeting.

The Forest Service conducted a 30-day scoping period which ended on April 5, 2010. They received comments from approximately 14 parties. Those comments were shared with the BLM, as most comments applied to both the FS and BLM lease nomination areas.

The BLM conducted a 30-day scoping period, with the publication of a Notice of Intent in the Federal Register, which ended on June 24, 2010. We received comments from approximately 14 parties, 7 of which had also submitted similar comments during the FS scoping period. On June 14, 2010, BLM held another public meeting at which the same information presented at the March 11 meeting was available again. Five people attended that meeting.

On September 2, 2010, the Forest Service and BLM hosted another public meeting. Both agencies had maps and other displays to provide information about the analyses conducted up to that point, including the proposed actions and alternatives that were developed, and any associated lease stipulations. In addition, a video of a tour of a geothermal electric production facility in Idaho was presented. The tour of that facility helped inform the respective Interdisciplinary Teams about potential impacts. Representatives from the State of Colorado, Governor's Energy Office and Colorado Geological Survey were in attendance to help answer questions, particularly related to State water rights and geothermal rights. The meeting was conducted as an open house where attendees could review the various maps and other displays, and ask questions of the FS, BLM, and State agency employees. Approximately 25 people attended the public meeting.

The EA was made available for public review from November 4, 2010 to December 4, 2010. A total of 19 individuals, organizations, and federal, state, and local governments/agencies submitted written comments. The comments on the EA cited concerns about: Gunnison sage grouse; big game; access; noise; private lands; Gunnison's prairie dog; Canada lynx; water quality and water resources; socio-economics; exceptions, waivers, and modifications to lease stipulations; electric transmission lines; cumulative impacts; air quality; and cultural and paleontological resources.

All of the comments were reviewed by BLM. Appendix E of the EA includes a summary listing of the substantive comments and BLM's response to them. As detailed in Appendix E, response to some comments resulted in minor corrections or updates to the EA. Other comments required a clarification or a reference to the appropriate section of the EA, and were accordingly responded to in Appendix E.

The proposed decision, which was signed on March 24, 2011, was protested. The protest was reviewed by the BLM Director. The Director issued the Protest Resolution Report on August 10, 2011, which documents the Director's decision to deny the protest and the reasons for the decision. The report is available on the BLM Director's Protest Resolution webpage at:

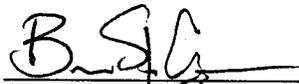
http://www.blm.gov/wo/st/en/prog/planning/planning_overview/protest_resolution/protestreports.html. The Director's decision is the final decision of the Department of the Interior.

The Approved RMP Amendment will be available electronically on the "Geothermal Lease Nomination Analysis" page of the BLM Gunnison Field Office website:
http://www.blm.gov/co/st/en/fo/gfo/geothermal_lease_nomination.html

APPENDICES:

A: Geothermal Lease Stipulations Amendment to the Gunnison Resource Area Approved Resource Management Plan

SIGNATURE OF RECOMMENDING OFFICIAL:



Brian St. George
Field Manager
BLM Gunnison Field Office

8/11/11

Date

DECISION

It is my decision to amend the Gunnison Resource Area Approved Resource Management Plan to include certain geothermal lease stipulations as described above and in Appendix A.

SIGNATURE OF AUTHORIZED OFFICIAL:



Helen Hankins,
BLM Colorado State Director

August 11, 2011

Date

Appendix A

Geothermal Lease Stipulations
Amended to the
Gunnison Resource Area Approved Resource Management Plan

The following is a listing of which geothermal lease stipulations are amended to the Gunnison RMP.

Number	Type	Purpose
G-10	NSO	To protect other status Gunnison sage-grouse leks
G-15	NSO	To protect mapped elk winter concentration areas
G-16	NSO	To protect gullies and other chronic erosion areas
G-17	NSO	To protect areas of geologic hazard
G-20	TL	To protect Gunnison sage-grouse lekking
G-21	TL	To protect Gunnison sage-grouse lekking
G-25	CSU	To protect mapped Gunnison sage-grouse summer-fall habitat
G-26	CSU	To protect water and geothermal rights and geothermal features
CO-52	CSU	To protect water and geothermal rights and geothermal features

See the following pages for complete descriptions of the geothermal lease stipulations and associated criteria for granting exceptions, modifications, or waivers to the stipulations.

EXHIBIT G-10

Lease Number:

NO SURFACE OCCUPANCY STIPULATION⁵

No surface occupancy or use is allowed on the lands described below (legal description or other description):

<ALL LANDS within 0.6 mile of any inactive, historic, or unknown status Gunnison sage-grouse leks.>

For the purpose of:

To maintain integrity of habitat surrounding leks that may be used during the breeding period.

Any changes to this stipulation will be made in accordance with the land use plan and/or the regulatory provisions for such changes. (For guidance on the use of this stipulation, see BLM Manual 1624 and 3101 or FS Manual 1950 and 2820.)

Exception Criteria:

An exception may be granted or substituted with a timing limitation or controlled surface use, by the Field Manager if an environmental analysis determines that the action, as proposed or conditioned, would not impair the function or utility of the site for current or subsequent reproductive display, including daytime loafing/staging activities. That analysis should consider minimizing the impact of surface disturbance by locating activities adjacent to areas of existing disturbance and infrastructure (such as roads or electrical transmission lines). The analysis should also weigh the potential cumulative impact of locating surface disturbing activities within 0.6 miles of an unknown or historic lek against the potential cumulative impacts of disturbing other sage-grouse habitat types within the lease area.

Modification Criteria:

The no surface occupancy area may be modified in extent, by the Field Manager if an environmental analysis finds that a portion of the area is nonessential to site utility or function, or that the proposed action could be conditioned so as not to impair the function or utility of the site for current or subsequent reproductive display, including daytime loafing/staging activities. That analysis should consider minimizing the impact of surface disturbance by locating activities adjacent to areas of existing disturbance and infrastructure (such as roads or electrical transmission lines). The analysis should also weigh the potential cumulative impact of locating surface disturbing activities within 0.6 miles of an unknown or historic lek against the potential cumulative impacts of disturbing other sage-grouse habitat types within the lease area.

⁵ Does not apply to existing roads open to public vehicle use or to existing authorized facilities, such as powerlines, administrative access roads, livestock and/or wildlife water developments, fences, etc.

The stipulation may also be modified if the proponent, Bureau of Land Management, Colorado Division of Wildlife, and where necessary, other affected interests, negotiate compensation that satisfactorily offsets anticipated impacts to sage grouse breeding activities and/or habitats.

Waiver Criteria:

This stipulation may be waived if, in cooperation with the Colorado Division of Wildlife, it is determined that the site has been unoccupied for a minimum of 10 years unless the area has been identified for habitat restoration and population recovery.

EXHIBIT G-15

Lease Number:

NO SURFACE OCCUPANCY STIPULATION⁶

No surface occupancy or use is allowed on the lands described below (legal description or other description).

On the lands described below:

<ALL LANDS within mapped elk winter concentration areas.>

For the purpose of:

To protect mapped elk winter concentration areas and limit disturbance to wintering elk in mapped elk winter concentration areas.

Any changes to this stipulation will be made in accordance with the land use plan and/or the regulatory provisions for such changes. (For guidance on the use of this stipulation, see BLM Manual 1624 and 3101 or FS Manual 1950 and 2820.)

Exception Criteria:

The Field Manager may grant an exception if an environmental analysis indicates that the proposed action can be conditioned so as not to interfere with the habitat function or compromise animal condition or security within the project vicinity. An exception may also be granted for actions intended to enhance the long-term utility or availability of suitable habitat.

Modification Criteria:

None

Waiver Criteria:

None

NOTE: Any requests for exceptions, modifications, and/or waivers on split-estate private surface lands will be considered in light of any surface use agreement(s) between the landowner and the lessee/operator.

⁶ Does not apply to existing roads open to public vehicle use or to existing authorized facilities, such as powerlines, administrative access roads, livestock and/or wildlife water developments, fences, etc.

EXHIBIT G-16

Lease Number:

NO SURFACE OCCUPANCY STIPULATION⁷

No surface occupancy or use is allowed on the lands described below (legal description or other description).

On the lands described below:

<ALL LANDS within 50 feet of a gully or other area of chronic erosion if adjacent and surrounding slopes are less than 30% or within 100 feet of a gully or other area of chronic erosion if adjacent and surrounding slopes are in excess of 30%.>

For the purpose of:

To protect gully areas and other areas of chronic erosion.

Any changes to this stipulation will be made in accordance with the land use plan and/or the regulatory provisions for such changes. (For guidance on the use of this stipulation, see BLM Manual 1624 and 3101 or FS Manual 1950 and 2820.)

Exception Criteria:

In the event the lessee demonstrates that operations can be conducted without causing unacceptable impacts and that less restrictive measures will protect the public interest, an exception may be approved by the Authorized Officer. A request for an exception must include an engineering and reclamation plan which provides a high level of certainty that such operations can be conducted consistent with BLM's surface operating standards and guidelines for Oil and Gas Exploration and Development. All elements of the Steep Slopes CSU would apply (Exhibit G-24). In addition, the operator must provide sufficient on-site analysis of soil types, vegetation types, aspect, depth to bedrock, nature of subsurface materials and potential for below ground seeps or springs. The lessee must also provide an evaluation of past practices on similar terrain and be able to demonstrate success under similar conditions. Previous success under similar conditions would be a critical element in the Authorized Officer's determination.

Modification Criteria:

None

Waiver Criteria:

None

NOTE: Any requests for exceptions, modifications, and/or waivers on split-estate private surface lands will be considered in light of any surface use agreement(s) between the landowner and the lessee/operator.

⁷ Does not apply to existing roads open to public vehicle use or to existing authorized facilities, such as powerlines, administrative access roads, livestock and/or wildlife water developments, fences, etc.

EXHIBIT G-17

Lease Number:

NO SURFACE OCCUPANCY STIPULATION⁸

No surface occupancy or use is allowed on the lands described below (legal description or other description).

On the lands described below:

<ALL LANDS encompassed by areas of geologic hazard, which consist of landslide deposits from Tomichi Dome. >

For the purpose of:

To protect areas of geologic hazard.

Any changes to this stipulation will be made in accordance with the land use plan and/or the regulatory provisions for such changes. (For guidance on the use of this stipulation, see BLM Manual 1624 and 3101 or FS Manual 1950 and 2820.)

Exception Criteria:

In the event the lessee demonstrates that operations can be conducted without causing unacceptable impacts and that less restrictive measures will protect the public interest, an exception may be approved by the Authorized Officer. A request for an exception must include an engineering and reclamation plan which provides a high level of certainty that such operations can be conducted consistent with BLM's surface operating standards and guidelines for Oil and Gas Exploration and Development. All elements of the Steep Slopes CSU would apply (Exhibit G-24). In addition, the operator must provide sufficient on-site analysis of soil types, vegetation types, aspect, depth to bedrock, nature of subsurface materials and potential for below ground seeps or springs. The lessee must also provide an evaluation of past practices on similar terrain and be able to demonstrate success under similar conditions. Previous success under similar conditions would be a critical element in the Authorized Officer's determination.

Modification Criteria:

None

Waiver Criteria:

None

NOTE: Any requests for exceptions, modifications, and/or waivers on split-estate private surface lands will be considered in light of any surface use agreement(s) between the landowner and the lessee/operator.

⁸ Does not apply to existing roads open to public vehicle use or to existing authorized facilities, such as powerlines, administrative access roads, livestock and/or wildlife water developments, fences, etc.

EXHIBIT G-20

Lease Number:

TIMING LIMITATION STIPULATION

No construction or drilling activities are allowed during the following time period(s).

NOTE: This stipulation does not apply to routine operations, maintenance, and other activities. Routine operations and maintenance are characterized as any scheduled activity that is required to preserve ongoing production and maintain existing equipment and facilities to an adequate level of service.

March 15 through May 15

On the lands described below:

<ALL LANDS within occupied Gunnison sage-grouse habitat.>

For the purpose of (reasons):

To protect Gunnison sage-grouse lekking habitat and Gunnison sage-grouse during lekking season.

Any changes to this stipulation will be made in accordance with the land use plan and/or the regulatory provisions for such changes. (For guidance on the use of the stipulation, see BLM Manual 1624 and 3101 or FS Manual 1950 and 2820.)

EXCEPTION: The authorized officer may grant an exception if an environmental review in coordination with appropriate local, state, and federal agencies determines that the action, as proposed or conditioned will not affect nest attendance, egg or chick survival, nesting/brood-rearing success. An exception could also be granted by the Authorized Officer if the proponent, BLM, and State wildlife agency and where necessary, other affected interests, develop non-monetary compensation or mitigation that would satisfactorily offset the anticipated losses of nesting habitat or nesting activities. Actions designed to enhance the long-term utility or availability of suitable Gunnison sage-grouse habitat may be exempted from the timing limitations.

MODIFICATION: The authorized officer may modify the size and shape of the timing limitation area if an environmental analysis in coordination with appropriate local, state, and federal agencies indicates the actual habitat suitability for nesting/ brood-rearing is greater or less than the 4-mile radius. Timeframes may be modified based on studies documenting local periods of actual use.

WAIVER: This stipulation may be waived, if after consulting with the State wildlife agency, it is determined that the described lands are incapable of serving the long-term requirements of Gunnison sage-grouse nesting habitat and that these ranges no longer warrant consideration as components of Gunnison sage-grouse nesting/brood-rearing habitat.

EXHIBIT G-21

Lease Number:

TIMING LIMITATION STIPULATION

No routine operations, maintenance, and other activities in occupied Gunnison sage-grouse habitat will be allowed during the following night-time hours. This restriction applies to human activity, and not to continuing operation of equipment and facilities, such as well pumps, power plant, and cooling equipment.

NOTE: Routine operations and maintenance are characterized as any scheduled activity that is required to preserve ongoing production and maintain existing equipment and facilities to an adequate level of service.

4:00 p.m. and 9:00 a.m. during the period between March 15 and May 15.

On the lands described below:

<ALL LANDS within occupied Gunnison sage-grouse habitat.>

For the purpose of (reasons):

To protect Gunnison sage-grouse lekking habitat and Gunnison sage-grouse during lekking season.

Any changes to this stipulation will be made in accordance with the land use plan and/or the regulatory provisions for such changes. (For guidance on the use of the stipulation, see BLM Manual 1624 and 3101 or FS Manual 1950 and 2820.)

EXCEPTION: The authorized officer may grant an exception if an environmental review in coordination with appropriate local, state, and federal agencies determines that the action, as proposed or conditioned will not affect nest attendance, egg or chick survival, nesting/brood-rearing success. An exception could also be granted by the Authorized Officer if the proponent, BLM, and State wildlife agency and where necessary, other affected interests, develop non-monetary compensation or mitigation that would satisfactorily offset the anticipated losses of nesting habitat or nesting activities. Actions designed to enhance the long-term utility or availability of suitable Gunnison sage-grouse habitat may be exempted from the timing limitations.

MODIFICATION: The authorized officer may modify the size and shape of the timing limitation area if an environmental analysis in coordination with appropriate local, state, and federal agencies indicates the actual habitat suitability for nesting/ brood-rearing is greater or less than the 4-mile radius. Timeframes may be modified based on studies documenting local periods of actual use.

WAIVER: This stipulation may be waived, if after consulting with the State wildlife agency, it is determined that the described lands are incapable of serving the long-term requirements of Gunnison sage-grouse nesting habitat and that these ranges no longer warrant consideration as components of Gunnison sage-grouse nesting/brood-rearing habitat.

EXHIBIT G-25

Lease Number:

CONTROLLED SURFACE USE STIPULATION

Surface occupancy or use is subject to the following special operating constraints.

On the lands described below:

<ALL LANDS within mapped Gunnison sage-grouse summer-fall habitat.>

For the purpose of:

To protect mapped Gunnison sage-grouse summer-fall habitat, the project applicant will be required to submit a plan to meet the resource management objectives through special design, construction, operation, mitigation, or reclamation measures, and/or relocation. Unless the plan is approved, no surface occupancy would be allowed in the mapped Gunnison sage-grouse summer-fall habitat.

Any changes to this stipulation will be made in accordance with the land use plan and/or the regulatory provisions for such changes. (For guidance on the use of this stipulation, see BLM Manual 1624 and 3101 or FS Manual 1950 and 2820.)

Exception Criteria: The authorized officer may grant an exception if an environmental review in coordination with appropriate local, state, and federal agencies determines that the action, as proposed or conditioned will not affect nest attendance, egg or chick survival, nesting/brood-rearing success. An exception could also be granted by the Authorized Officer if the proponent, BLM, and State wildlife agency and where necessary, other affected interests, develop non-monetary compensation or mitigation that would satisfactorily offset the anticipated losses of nesting habitat or nesting activities. Actions designed to enhance the long-term utility or availability of suitable Gunnison sage-grouse habitat may be exempted from the timing limitations.

Modification Criteria: The authorized officer may modify the size and shape of the timing limitation area if an environmental analysis in coordination with appropriate local, state, and federal agencies indicates the actual habitat suitability for nesting/ brood-rearing is greater or less than the 4-mile radius. Timeframes may be modified based on studies documenting local periods of actual use.

Waiver Criteria: This stipulation may be waived, if after consulting with the State wildlife agency, it is determined that the described lands are incapable of serving the long-term requirements of Gunnison sage-grouse nesting habitat and that these ranges no longer warrant consideration as components of Gunnison sage-grouse nesting/brood-rearing habitat.

EXHIBIT G-26

Lease Number:

CONTROLLED SURFACE USE STIPULATION

Surface occupancy or use is subject to the following special operating constraints.

On the lands described below:

<ALL LANDS>

For the purpose of:

To prevent potential material injury to senior water or geothermal rights under Colorado state law, and to ensure that existing geothermal features are protected a comprehensive geologic and hydrogeologic study, and interpretation that assesses hydraulic relationships in the area, will be required prior to the lessee/operator being approved by the BLM to operate any production or injection wells.

Any changes to this stipulation will be made in accordance with the land use plan and/or the regulatory provisions for such changes. (For guidance on the use of this stipulation, see BLM Manual 1624 and 3101 or FS Manual 1950 and 2820.)

Exception Criteria:

This stipulation is intended to apply to operating, rather than drilling and testing, production and injection wells. The Authorized Officer may grant an exception if an environmental review, in coordination with appropriate local, state, and/or federal agencies determines that operation of production and/or injection wells is necessary for a comprehensive geologic and hydrogeologic study.

EXHIBIT CO-52

Lease Number:

CONTROLLED SURFACE USE STIPULATION

Surface occupancy or use is subject to the following special operating constraints.

On the lands described below:

<ALL LANDS>

For the purpose of:

To prevent potential material injury to senior water or geothermal rights under Colorado state law, and to ensure that existing geothermal features are protected under the terms of BLM's applicable Resource Management Plan, as amended by the Record of Decision and Resource Management Plan Amendments for Geothermal Leasing in the Western United States, 2008, as appropriate, this lease is restricted as follows.

Monitoring of the quantity, quality, or temperature of surface or subsurface water resources by the lessee prior to and during all lease operations, including exploration, development, and utilization of a geothermal resource, may be required as directed by the BLM in consultation with the Colorado State Engineer's Office, and the burden of proof shall be on the lessee to ensure compliance with federal and state statutes, rules, and regulations.

Material injury may be determined by the relevant Colorado Water Court, and such an order from the Water Court may result in limitations on the use of the resource.

NOTE: If monitoring is required, the lessee/operator must also demonstrate to the BLM that they have made a good faith effort to work with the owners of the Upper and Lower Waunita Hot Springs to develop an effective monitoring program. The monitoring program would be designed to determine if there are any impacts to water quality, quantity, and/or temperature of the Waunita Hot Springs during any exploration, development, and production of the lease.

Any changes to this stipulation will be made in accordance with the land use plan and/or the regulatory provisions for such changes. (For guidance on the use of this stipulation, see BLM Manual 1624 and 3101 or FS Manual 1950 and 2820.)

