

Background

The U.S. Forest Service, Santa Fe National Forest (SFNF) is located in north-central New Mexico, approximately 40 miles north of Albuquerque. On its western edge, the SFNF contains a small portion of the San Juan Basin—a geologic region of northwest New Mexico and southwest Colorado—known for its reserves of oil and natural gas. The oil-gas study area of the SFNF relevant to this environmental impact statement (EIS) is in the easternmost part of the San Juan Basin, outside of the most productive oil and gas formations, as shown in Figure OG-1. In the study area, there are 83,529 acres of National Forest System lands under 426 oil-gas leases, 45 percent of which is on Federal land.

The National Environmental Policy Act of 1969 (NEPA) requires every Federal agency to give appropriate consideration to all reasonably foreseeable environmental impacts of proposed actions as part of agency planning and decisionmaking. Therefore, any proposed activity that uses or crosses public land must be reviewed by the Federal agency for its potential environmental impacts or concerns. This EIS was developed in accordance with NEPA to identify and assess potentially significant environmental impacts and address issues associated with the proposed update and analysis of oil-gas leasing and development within the San Juan Basin areas of the SFNF.

In 2003, the Bureau of Land Management (BLM) issued a decision that addressed the management of Federal minerals within the New Mexico portion of the San Juan Basin. The effects analyses in the EIS associated with the resource management plan revision for the BLM-Farmington Field Office considered the potential for development of the eastern part of the San Juan Basin located within the SFNF, based on projected oil and gas development over the next 20 years. However, this analysis was not designed to meet the requirements of the Forest Service.

The “Santa Fe National Forest Plan” (Forest Plan), approved in 1987, provides broad direction regarding leasing and the management of oil and gas development on forest land. However, since the approval of the Forest Plan, it has been determined that the Forest Plan and its analysis (Final EIS) did not address the potential environmental effects of future leasing and development on the SFNF sufficiently enough to make new lease issuance decisions.

When National Forest System lands are being considered for oil-gas leasing, the Forest Service must verify that the lands have been adequately analyzed in a forest plan level leasing analysis, that leasing decisions are based on the analysis, and that there is no new significant information or circumstances requiring further environmental analysis. Once that is verified, the Forest Service can authorize the BLM to issue a lease on those lands. Leasing analyses must comply with NEPA and its implementing regulations at 36 CFR 1500-1508 in considering the effects of leasing on the human environment, including reasonably foreseeable future development. The leasing analysis must also comply with the National Forest Management Act (NFMA) and associated regulations at 36 CFR 219, by considering the suitability of lands for leasing and development and making decisions regarding the availability for leasing. The lessee must then obtain Forest Service approval prior to oil-gas exploration and development, which requires a second level of NEPA analysis and decisionmaking that is more site specific and based on a specific surface use plan of operations.

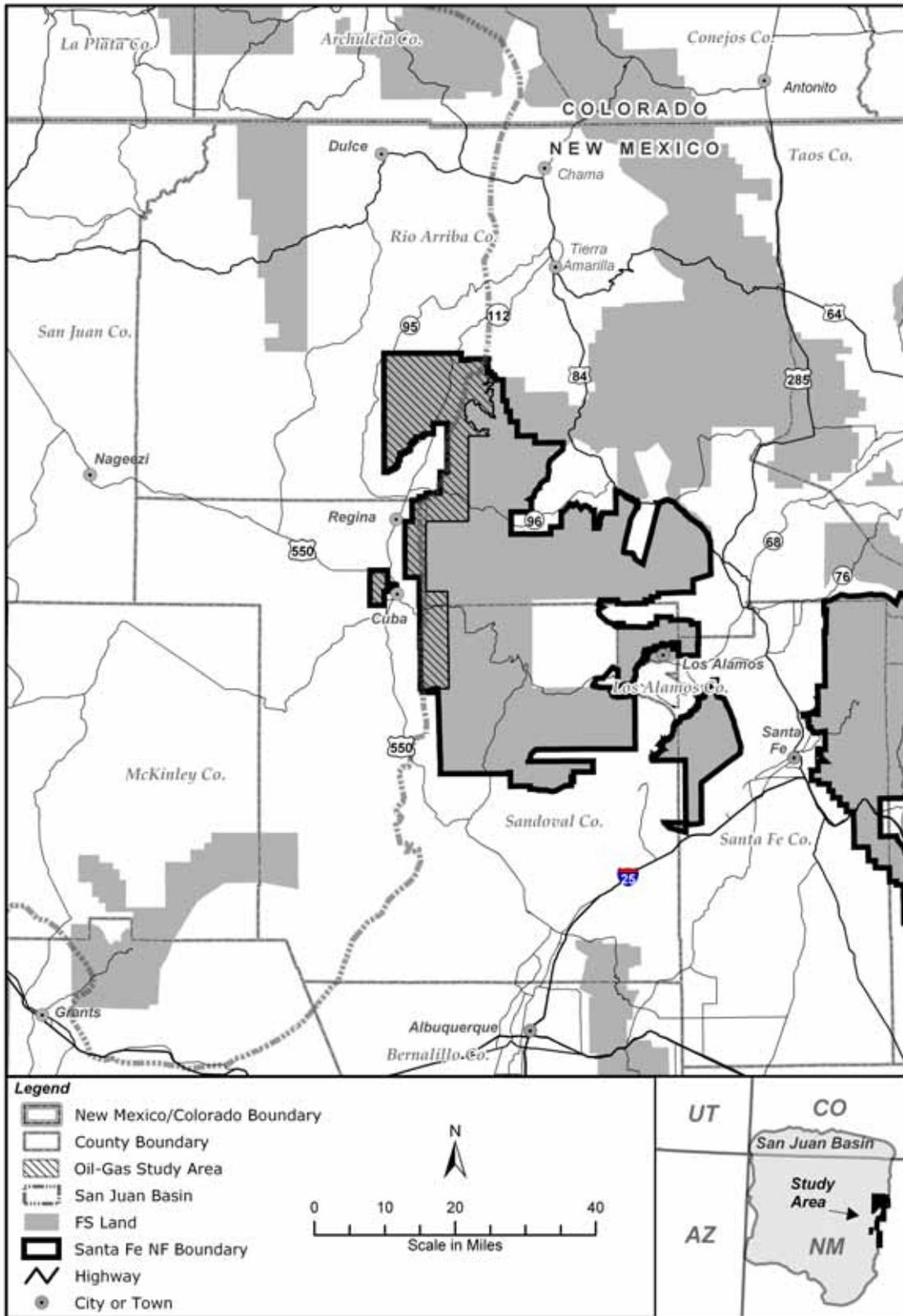


Figure OG-1. Oil-gas study area

Purpose and Need

There is a need for a more specific and up-to-date description of oil and gas leasing availability and stipulations identified in the Forest Plan, as well as a more comprehensive NEPA analysis of the potential cumulative effects of reasonably foreseeable future oil and gas leasing and development within the study area. This Proposed Action is needed to comply with Forest Plan leasing analysis and decisions regulations, and comply with Agency policy to minimize impacts to surface resources while at the same time facilitating timely development of oil and gas resources.

The purpose of the Proposed Action is to:

- Improve the programmatic analysis of the effects of oil and gas leasing and development on the SFNF, including a cumulative effects analysis.
- Improve the timeliness and efficiency in processing current and future expressions of interest in oil and gas leasing on the SFNF, consistent with the National energy policy.
- Improve the Agency's ability to protect surface resources that may not be adequately addressed by standard leasing terms and conditions.

Most of the oil or gas leases on the SFNF were issued prior to 1970 (before the NEPA or the NFMA), and oil-gas leasing and development in the San Juan Basin was authorized without full consideration of potential cumulative effects on surface resources.

The current Forest Plan oil and gas leasing availability categories were developed in 1979-1982 with limited inventory data or analysis. The 1987 Forest Plan leasing direction is too broad and does not reflect current resource concerns within the study area. For example, it does not provide any stipulations for protecting riparian areas, unstable steep slopes, significant scenic corridors or historic sites, or other resources that may not be adequately protected under standard leasing terms and conditions.

The Forest Plan needs to be amended so it can be used when providing agency recommendations to the BLM for issuing new leases on SFNF lands. There is a need to complete this amendment now rather than waiting for Forest Plan revision, not scheduled for completion until at least 2009. The SFNF has expressions of interest in oil-gas leasing on the SFNF, and 55 percent of the Federal land in the study area has not yet been leased. The proposed amendment would not affect existing or transferred leases; it would only apply to new leases that may be issued in the future.

Public Involvement

The Notice of Intent (NOI) for developing an EIS to analyze proposed oil and gas leasing and roads management was published in the Federal Register on September 30, 2004. The NOI asked for public comment on the proposal from September 30 through October 20, 2004. In addition, as part of the public involvement process, the Agency met with oil-gas industry representatives to discuss the need for the EIS. The Agency also obtained information on the adequacy of the projections for oil and gas development provided by the Reasonable Foreseeable Development Scenario (RFDS) for the San Juan Basin completed under contract to the BLM and supplemented by the SFNF geologist.

Immediately prior to publication of the NOI in the Federal Register, a scoping letter was distributed to over 300 private citizens, organizations, elected officials, and agencies, describing

the Proposed Action and solicited comments. A separate scoping letter was mailed from the forest supervisor to 26 pueblos and tribes on October 8 to describe the Proposed Action and solicit comments. Two public scoping meetings were held—in Cuba, New Mexico on October 6 and in Santa Fe, New Mexico on October 12, 2004. A total of 16 people provided feedback on the Proposed Action, resulting in a total of 105 distinct comments that were considered during development of the alternatives. While many of the comments related to both oil-gas leasing and road management, aspects of the Proposed Action described in the scoping letter, there were 15 comments that pertained primarily to road management, with the rest (90) related to the oil-gas leasing decision.

The Notice of Availability for the Draft EIS was published in the Federal Register on March 10, 2006 (Volume 71, Number 47, page 12356). The document was sent to 19 recipients, including agencies, organizations, and interested individuals. By the end of the comment period, April 24, 2006, the Forest Service received 21 distinct comments from 5 individual commenters. The comments and responses are included in Appendix C of this final EIS.

Issues

The Forest Service developed the No Action and Proposed Action alternatives, and one additional alternative in response to issues raised by the public during scoping. Significant issues may drive the formulation of alternatives to the Proposed Action so that the decision maker and the public can see the tradeoffs among alternative ways of achieving the purpose and need. Other comments identified issues to be considered during effects analyses. The Forest Service identified one significant issue during scoping that generated a second action alternative. The comment that was incorporated into Alternative 3 is to establish no surface occupancy for one-half mile around San Pedro Parks Wilderness and within inventoried roadless areas (IRAs) located outside of the nonmotorized recreation areas.

Alternatives

Alternative 1—No Action

Under the No Action Alternative, standard lease terms and conditions or limited surface use, as identified in the current Forest Plan, would continue to guide management of oil-gas leasing in the study area. No additional constraints on oil-gas leasing would be implemented to protect surface resources. Conditions of Approval (COA) or mitigation measures would continue to apply. Figure OG-2 illustrates leasing categories in the study area under the No Action Alternative.

Alternative 2—Proposed Action

The Forest Service proposes to update oil and gas lease availability and stipulations within the study area in order to meet the purpose and need. The Proposed Action, which is the preferred alternative, would only apply to new leases and would result in a Forest Plan amendment. The Proposed Action would add specific stipulations of “no surface occupancy,” “controlled surface use,” or “timing limitation” where needed to protect wildlife and surface resources. The proposed stipulations describe specific direction regarding surface occupancy or use, their purpose, the location and/or conditions under which they apply, and exceptions.

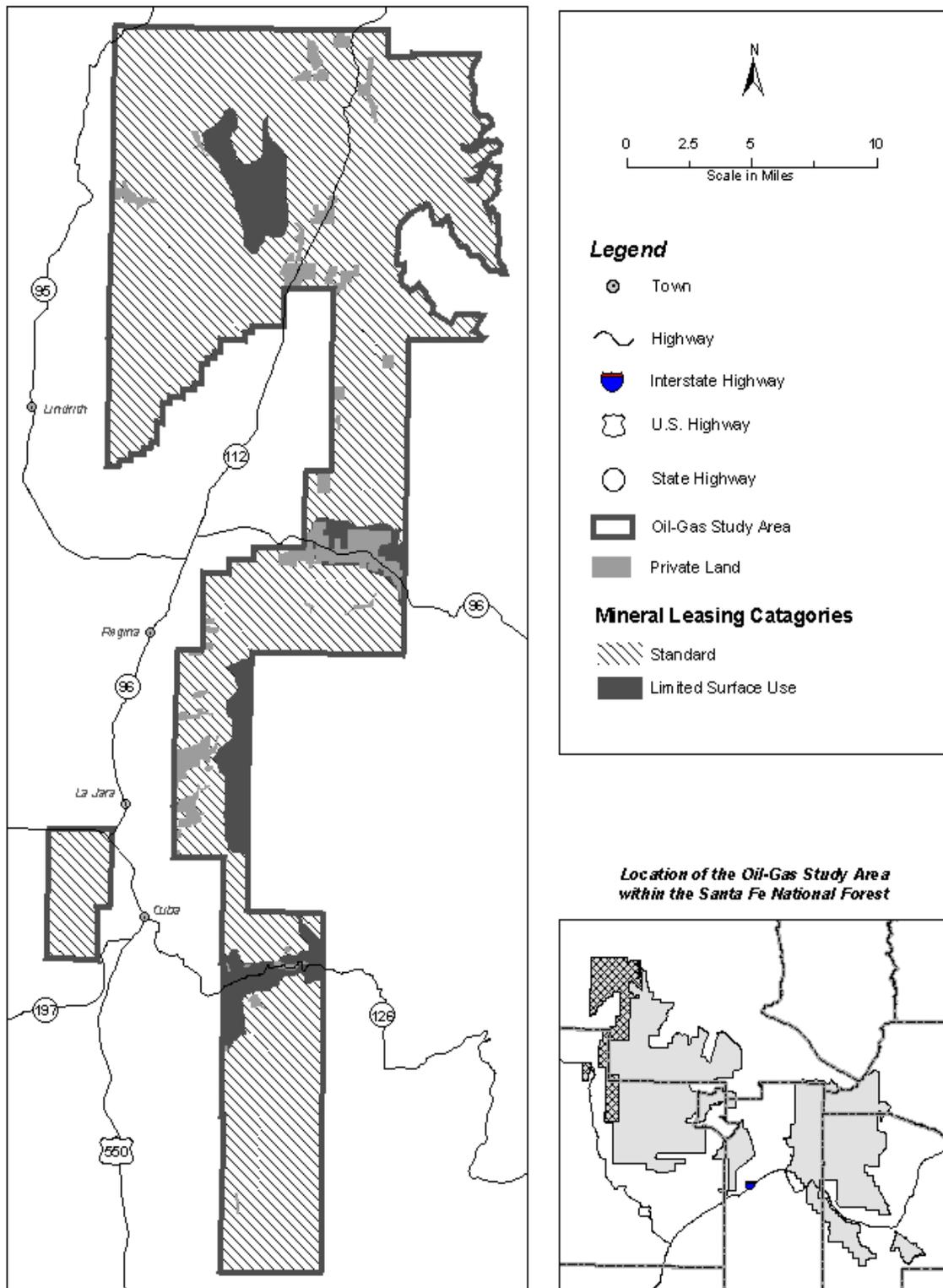


Figure OG-2. Oil-gas leasing categories under the No Action Alternative within the study area

New proposed stipulations include:

- No surface occupancy for certain unstable slopes, roadless recreation areas, and specific heritage resource sites;
- Controlled surface use for certain riparian, inventoried roadless, and scenic areas; and
- Timing limitations to protect spotted owl, northern goshawk, peregrine falcon, big game winter range, calving/fawning areas and habitats.

The Proposed Action does not include any COAs or mitigation measures, which are developed and applied during second level NEPA site-specific analysis of the APD surface use plans of operations. At that time, the Forest Service would ensure that applicable COAs are consistent with established BLM and Forest Service policies in the San Juan Basin for managing noise and air quality.

The proposed stipulations are identified by the resource they would protect, such as designated wildlife habitat, scenic areas, nonmotorized recreation areas, and heritage resources. All lease stipulations combined are shown in Figure OG-3. Where lease stipulations overlap, the most stringent or the combination would apply.

Alternative 3

In response to public scoping comments regarding protection of roadless and wilderness areas, this alternative increases the acreage of NSO lease stipulations, while all other lease stipulations in the Proposed Action would be the same. Under this alternative, the inventoried roadless area (IRA) at the north end of the district and a one-half mile buffer along and bordering San Pedro Parks Wilderness within the study area are proposed for an NSO lease stipulation. The NSO lease stipulation would not apply to the IRA bordering the west side of San Pedro Parks Wilderness. These NSO lease stipulations would apply in addition to the areas proposed under Alternative 2. Figure OG-4 shows the location of all lease stipulations proposed under Alternative 3.

Environmental Consequences

This section provides a summary of the effects of implementing each alternative. Information in Table OG-1 is focused on activities and effects where different levels of effects or outputs can be distinguished quantitatively or qualitatively among alternatives. This is derived from the analysis described in detail in chapter 3 of this EIS.

Mitigation Measures

There are no site-specific mitigation measures or monitoring requirements for the action alternatives because this is a programmatic EIS and does not authorize any land-disturbing activities on National Forest System lands.

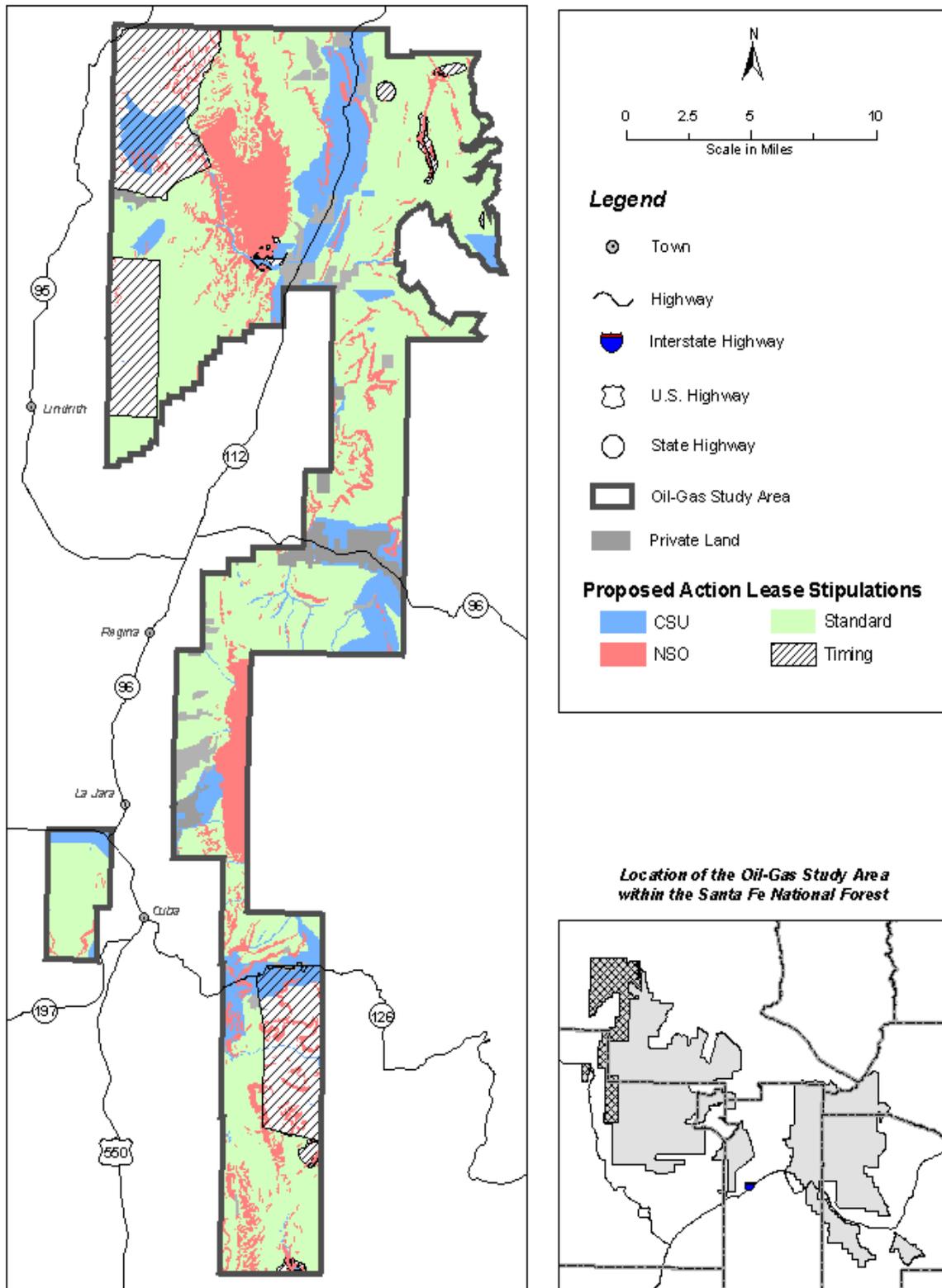


Figure OG-3. Proposed Action: All lease stipulations within the study area

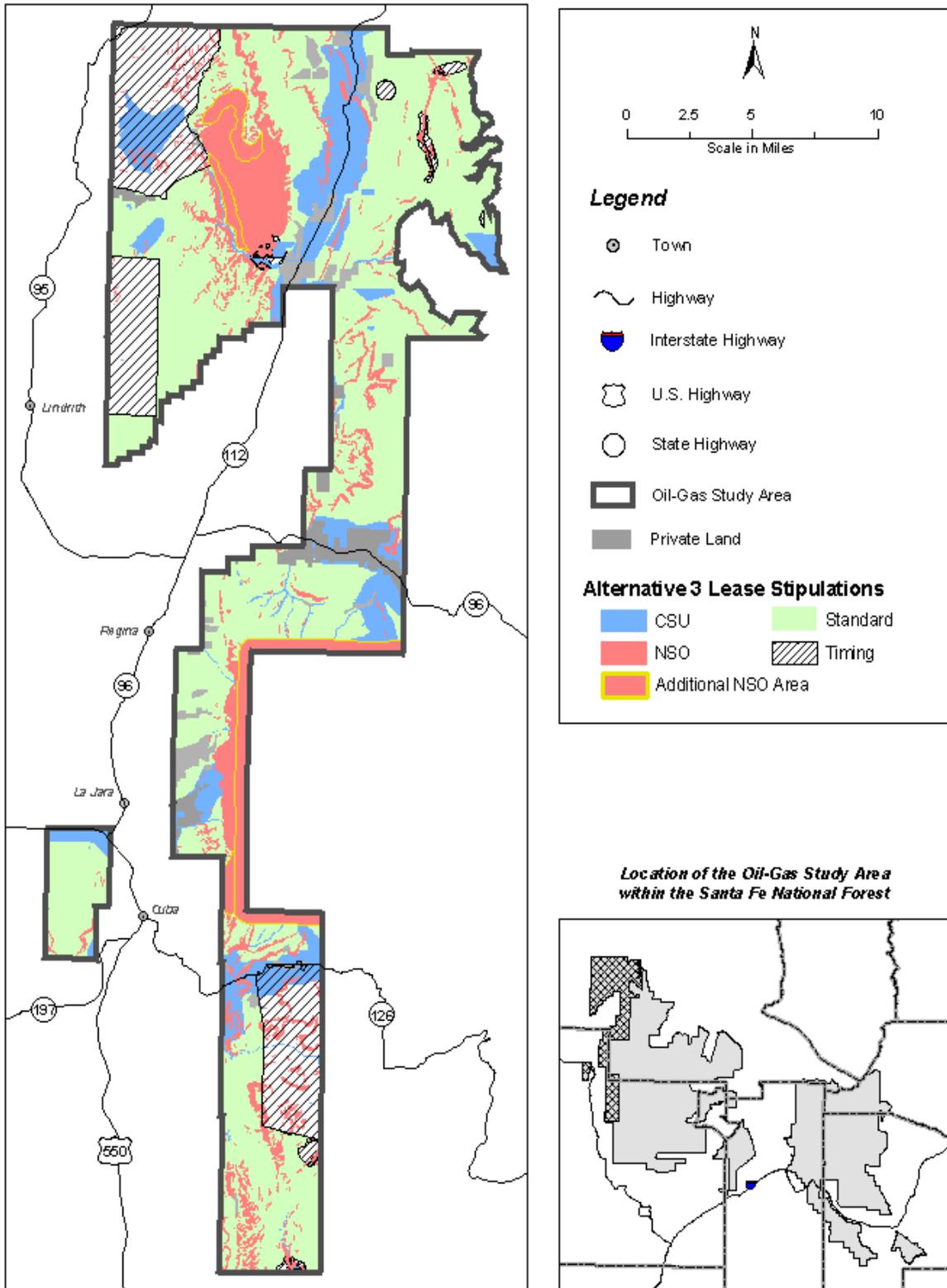


Figure OG-4. Alternative 3: All lease stipulations within the study area

Table OG-1. Comparison of impacts under each alternative

Resources	Alternative 1 (No Action)	Alternative 2 (Proposed Action)	Alternative 3
Minerals	Inadequate protection of sensitive surface resources, while allowing additional minerals development.	Proposed stipulations would not affect valid existing leases. Future leasing and development would provide improved protection of surface resources.	Increased protection of surface resources with additional protection within one-half mile of IRA and wilderness areas under proposed stipulations on new leases. More directional drilling would be required to access leases in NSO areas.
Soils and Watershed Management	No direct impacts to soils. Provides fewest protections to soils and watershed management under standard terms and conditions.	NSO stipulations on new leases would protect almost 26,000 acres on steep slopes, if leased.	NSO stipulations on new leases would protect almost 30,000 acres on steep slopes, if leased.
Water	No direct impacts to water resources. Provides least amount of protection of downstream surface water from future development. Compliance with laws and regulations would minimize impacts.	No direct impacts to water resources. Provides more protection of downstream surface water from future development than Alternative 1. Compliance with laws and regulations would minimize impacts.	No direct impacts to water resources. Provides slightly more protection of downstream surface water from future development than Alternative 2. Compliance with laws and regulations would minimize impacts.
Air Quality	No alternative would result in an increase or decrease in the number of wells projected in the study area, so there would be no direct impacts to air quality.		
Vegetation	16,506 acres with CSU leasing restrictions that minimize impacts to vegetation.	71,948 acres with CSU or NSO leasing restrictions that minimize impacts to vegetation.	81,865 acres with CSU or NSO leasing restrictions that minimize impacts to vegetation.
Wildlife Habitat	Provides the fewest restrictions on surface disturbance through lease stipulations, and the least amount of surface protection for wildlife habitat.	Provides the second highest amount of restrictions on surface disturbance (NSO approximately 12,100 acres) through lease stipulations, and the second most surface protection for wildlife habitat.	Provides the most restrictions on surface disturbance (NSO approximately 18,960 acres) through lease stipulations, and the highest amount of surface protection for wildlife habitat.
Management Indicator Species	No change to management indicator species populations or habitat trends would result under any alternative.		
Migratory Bird Habitat	No direct impacts to migratory bird habitat. Provides the least protection of habitat on future leases.	No direct impacts to migratory bird habitat. Provides the second greatest protection of habitat on future leases.	No direct impacts to migratory bird habitat. Provides slightly more protection of habitat on future leases.
Threatened, Endangered,	No effect to any listed species would result.		

Table OG-1. Comparison of impacts under each alternative

Resources	Alternative 1 (No Action)	Alternative 2 (Proposed Action)	Alternative 3
and Sensitive Species			
Heritage Resources	No direct impacts to heritage resources. Provides the least protection on future leases.	No direct impacts to heritage resources. Provides the second most protection on future leases.	No direct impacts to heritage resources. Provides slightly more protection on future leases.
Recreation and Wilderness	No direct impacts. No change in current Forest Plan which provides limited surface use in Management Area L.	Additional protection through NSO stipulations on new leases would limit surface disturbance and well development, providing protection for some key recreation and wilderness areas.	Provides more surface protection for San Pedro Parks Wilderness than Alternative 2, providing additional protection for some key recreation and wilderness areas.
Inventoried Roadless Areas	IRAs are currently covered by Limited Surface Use in Forest Plan Management Area L, which does not preclude road construction.	NSO lease stipulations in IRAs in Management Area L would limit new road construction.	Expands NSO to include IRAs outside of Management Area L, providing additional limitations on road construction within IRAs.
Visual Resources	No direct impacts. Future development projected to occur in Management Areas R and S where there are existing oil-gas wells and visual resource management is a low priority.	No direct impacts. Additional protection of Management Area L through NSO stipulations on new leases would help to retain visual resource integrity in this area designated as retention.	No direct impacts. One-half mile buffer for Management Area L and wilderness would provide additional protection with NSO.
Livestock Grazing	No direct impact. Greatest indirect impacts on rangeland health and forage production due to least restrictive leasing stipulations and a likelihood to increase the extent of surface disturbance and noxious weeds.	No direct impact. Indirect impacts on rangeland health and forage production would be second highest, due to more restrictive leasing stipulations to limit the extent of surface disturbance and noxious weeds on new leases.	No direct impact. Indirect impacts on rangeland health and forage production would be highest, due to the most restrictive leasing stipulations to limit the extent of surface disturbance and noxious weeds on new leases.
Fire Management	No impacts under any alternative.		
Social Environment	No significant impacts or differences across alternatives.		

Table OG-1. Comparison of impacts under each alternative

Resources	Alternative 1 (No Action)	Alternative 2 (Proposed Action)	Alternative 3
Economics	No impacts to economic conditions.	Development of new leases may be more expensive than under Alternative 1, due to the proposed NSO stipulations. The quantity of economically recoverable reserves could be lower than Alternative 1 due to directional drilling on new leases. This may cause slight decreases in employment, income, and tax revenues if new leases were developed in the future.	Development of new leases may be more expensive than under Alternative 2, due to the slightly increased acreage of NSO stipulations. The quantity of economically recoverable reserves could be lower than Alternative 2 due to directional drilling on new leases. This may cause slight decreases in employment, income, and tax revenues if new leases were developed in the future.
Environmental Justice	Little or no effect on minority and low-income populations under any alternative.		

Cumulative Impacts

The Proposed Action and Alternative 3 would apply only to future leases in the oil-gas study area, not existing leases, so the direct effect of proposed stipulations on new leases would not affect foreseeable development and would be the same as that under Alternative 1. In addition, leasing of an area does not guarantee well development, as permissions for drilling are obtained by applying for an Application for Permit to Drill (APD). Reasonably foreseeable oil-gas development projections indicate approximately 20 new well locations would be constructed on valid existing leases in the study area that are subject to standard terms and conditions. As a result, the contribution of this leasing decision to regional cumulative impacts to the human environment would be few.

Irreversible and Irretrievable Commitment of Resources

Few irreversible and irretrievable commitments of resources would result directly from the leasing decision to be made, but would result from the development of oil-gas wells. Due to the projected extraction of Federal oil and gas from beneath the study area, these resources would no longer be available for future use. Extraction of oil and gas resources would vary according to the lessee’s ability to access subsurface hydrocarbon resources under each alternative.

Other irretrievable impacts would occur from excavating or otherwise altering the natural soil horizons through the surface-disturbing activities projected to occur to construct well pads, roads, and pipelines. This would result in a loss of soil productivity on less than 200 acres within the study area.

