

## ***Purpose and Need for Action***

The mission of the Forest Service, and specifically the Carson National Forest, in relation to minerals management is two-fold: (1) Support, facilitate, and administer the orderly exploration, development, and production of minerals and energy resources on National Forest System Lands to help meet the present and future needs of the Nation; while, (2) Simultaneously protecting the environment and conserving the natural resource legacy (National Energy Policy, 3-1)

On the Jicarilla Ranger District this mission is accomplished in a variety of means depending upon the status of existing mineral rights and associated leases. The Reasonable Foreseeable Development Scenario for the San Juan Basin (Engler et al. 2001) projects almost 700 new wells on the Jicarilla Ranger District over the next 20 years in addition to the over 800 existing wells. This would result in an increase in well density and the potential to nearly double well pads. The increase in development would substantially increase surface disturbance on the district. The Forest has identified areas of concern where additional guidance is needed to protect surface resources during the development and production of fluid minerals. There is a need for amending the forest plan to provide additional standard and guidelines for the protection of surface resources in regards to leasing and the orderly development of future oil and gas production. The Forest has also identified five areas on the Jicarilla Ranger District that would need area specific standards and guidelines to protect resource values associated with each of these unique areas.

In addition, there is a need to determine if lands currently proposed for leasing will be offered and whether any new lands that come available in the future would be offered for leasing and what lease stipulations and conditions would be applied to those new leases.

## **Forest Plan Direction**

Other than the laws, regulations, and policies that must be followed, management direction for gas development on the Jicarilla Ranger District is found within general resource prescriptions in the Carson Forest Plan. The Forest Plan includes broad, general standards and guidelines for “the protection of surface resources in the following categories: slopes over 40 percent, riparian areas, critical wildlife habitats, and developed and proposed recreation sites” (USFS 1986). The current Forest Plan, as amended, does a good job balancing the majority of the various resource uses and desired conditions on the Jicarilla Ranger District. However it does not recognize the unique management associated with oil and gas development.

The Forest has identified a few areas of concern where additional guidance can be provided in anticipation of future demands and development of fluid mineral resources. These areas of concern include: water quality and soil erosion, big game winter range, archeological resources, noise, air quality, and Areas of Resource Concern.

### **Watershed/Soils**

The majority (approximately 90 percent) of the soils on the Jicarilla Ranger District are highly susceptible to water erosion. A watershed assessment completed for the Jicarilla Ranger District (USFS 2003a) indicates surface and gully erosion, sedimentation from roads, and surface disturbance due to gas development have been identified as the main causes of watershed deterioration. This is mainly due to sparse ground cover, surface disturbing activities, and unsurfaced roads in need of stabilization reducing site productivity.

If the Forest’s management direction remains unchanged, future gas development activities on the Jicarilla Ranger District would result in a 44 percent increase in road density. New roads and other developments are likely to be in locations that pose increased risk for erosion. The cumulative effects of increased roads, bare ground from existing well pads, new well pads, and

pipelines could increase erosion and sediment yields into the San Juan River drainage. There is a need to provide additional guidance in the Forest Plan to reduce impacts to water quality and soil erosion associated with oil and gas development on the district.

### Big Game Winter Range

Most of the Jicarilla Ranger District supports deer and elk winter range. An increase in the number of roads could potentially have a negative effect on winter range habitat by increasing fragmentation and reducing the effectiveness of habitat important for elk, deer, and other species' winter survival. Higher road densities and associated traffic may also create more disturbances to wildlife, especially in big game winter range.

Current open (ungated) road density in elk and deer winter range habitat during the winter months exceeds Forest Plan standards and guidelines of 0.5 mi/mi<sup>2</sup>. Closing roads in these areas to meet Forest Plan direction is not feasible. The open roads within the big game winter range are the main collectors and arterial roads and were constructed prior to the signing of the Forest Plan. Thus there is a need to amend the Forest Plan to allow existing open road densities within big game winter range to serve as the standard for the Jicarilla Ranger District only.

### Cultural Resources

The Jicarilla Ranger District has one of the highest archaeological site densities on the Carson National Forest. Most of these sites are relatively undisturbed. Continued gas development under current management direction has the potential to damage cultural resource sites through the direct impacts of ground-disturbing activities, the effects of altering the sites' surroundings, and the indirect impacts of erosion. The highly erosive nature of the soils in the Jicarilla Ranger District augments the potential threat to cultural resources from increased development, even for sites that are not directly in the path of construction activities.

Although archaeological surveys are conducted for each ground-disturbing activity and known cultural resource sites are avoided, more construction of well pads and pipelines make it harder to find suitable areas to drill that avoid the archaeological sites. This is particularly true of the cumulative impacts, and the impacts to the sites' settings and the overall cultural landscape. As the archaeological sites become harder to avoid, gas development in the Jicarilla Ranger District will become more difficult and more expensive, and the potential for damaging or losing archaeological sites will inevitably increase. There is a need to reduce overall surface impact associated with oil and gas development in order to reduce the likelihood of damaging or losing significant archeological sites.

### Noise

The San Juan Basin averages one wellhead compressor for every eight wells (Engler et al. 2001). In order to effectively drain the gas resource, the RFDS estimates that the number of wellhead compressors will also increase over the next 20 years—to one compressor for every two wells. In addition to single well compressors, there will be an increase in other noise sources, such as central delivery points and multiple compressors. Future development would create a substantial surge in oil and gas development associated noise.

The standard established to minimize compressor noise on wells extracting federal minerals is the Noise Policy defined by the BLM in the *Farmington Resource Management Plan* (BLM 2003a). This Noise Policy (see Appendix D) establishes Noise Sensitive Areas within the Jicarilla Ranger District that have maximum noise levels to protect human uses. There are other resources that may need require additional protection from increased noise created from oil and gas activities. The Forest Plan does not currently address noise created by oil and gas development or the 2003

BLM Noise policy. There is a need to incorporate reasonable and appropriate guidance for unwanted sound throughout the district.

### Air Quality

The San Juan Basin, including the Jicarilla Ranger District, contains many significant and potentially significant sources of air pollutant emissions. Significant sources include coal burning power plants and gas production facilities. Oil and gas production activities contribute emissions of certain criteria pollutants (sulfur dioxide, nitrogen oxides, particulate matter, carbon monoxide, and ozone) as well as other pollutants of concern such as volatile organic compounds (VOCs). Although there are no non-attainment areas within the San Juan Basin, cumulative impacts from all sources contribute to regional air quality problems.

Certain oil and gas production sources such as large compressor stations fall under state permitting programs. Other sources, such as wellhead pump jacks, individual well compressors, routine venting and purging of development lines, and dirt roads do not fall under this permitting authority. These smaller, unpermitted sources contribute to cumulative impacts to regional air quality problems including visibility impairment, consumption of Prevention of Significant Deterioration (PSD) increments, and the development of ground level ozone.

Because of the potential for these air quality impacts from oil and gas production activities, there is a need for guidance in the Forest Plan to minimize emissions to protect regional air quality.

### Areas of Resource Concern

The Carson National Forest has identified several areas on the Jicarilla Ranger District that currently exhibit special characteristics for the area (see Map XX). These areas are generally less developed or disturbed compared to the rest of the district and contain elements of seclusion, high occurrence of cultural resources, and/or scenic values. The management of these areas may emphasize certain surface resource values over others.

Existing road density in Bancos, La Jara, Valencia, and Fierro Canyons and Fierro Mesa is less than in other areas of the Jicarilla Ranger District; however future development is projected to result in a 70 percent increase in road density in and around these Areas of Resource Concern under current management. Over the next 20 years, continued gas development and associated activities would diminish the unroaded characteristics of these areas and reduce the remaining undisturbed habitat for wildlife on the Jicarilla Ranger District.

The sheer density of sites in Bancos Canyon make it an important regional cultural resource. Because of its significance Bancos Canyon is being considered for nomination as an archaeological district to the National Register of Historic Places. The New Mexico State Historic Preservation Officer has expressed specific interest to be involved in any future decisions related to Bancos Canyon. Gas development within Bancos Canyon could potentially impact cultural sites and consequently damage the context and setting of the archaeological district. Alteration of these characteristics would adversely affect sites, jeopardizing the canyon's eligibility for the National Register of Historic Places.

La Jara and Valencia canyons are important for their cultural resources as well. The projected increased level of oil and gas development on the Jicarilla Ranger District, direct, indirect, and cumulative impacts to archaeological sites within Bancos, La Jara, and Valencia canyons would be difficult to avoid.

United States (U.S.) Highway 64 (US 64) runs along Vaqueros Canyon in the La Jara Canyon watershed, through the center of the Jicarilla Ranger District (see Map 1-2). The corridor is

approximately 10 miles long and is the only paved road running through the district. As the primary east-west access in northwestern New Mexico, it receives a high volume of traffic, including interstate tourists. Vaqueros Canyon also supports riparian vegetation, providing a rare habitat type for the region. The vistas and riparian vegetation seen from the road also offer exceptional scenic value for visitors. Through a Forest Plan inventory process, the corridor has been designated as having a high quality of visual appeal and has been identified as an area where the existing scenic quality should be retained. Federally listed as a threatened species, bald eagles use the cliffs along the highway corridor to roost during the winter.

Overall, there is a need for clear direction in the form of standards and guidelines in the Carson Forest Plan to improve the protection of undisturbed wildlife habitat, unroaded characteristics, cultural resources, and visual quality of Bancos, Vaqueros, La Jara, Valencia, and Fierro Canyons, and Fierro Mesa.

### Administration of Oil and Gas Leases

For existing leases additional site-specific mitigation measures may be incorporated through negotiations with the applicant to protect site-specific resources identified. Additional mitigation measures may be required or negotiated at the Application for Permit to Drill (APD) stage as a result of on the ground examination and site-specific NEPA analysis. Conditions of Approval (COA) can be required if they are within the terms of the lease and negotiated if they are outside the terms of the lease. These COA's are determined on a site-specific, case-by-case basis. Any post-lease mitigation measures that are applied may not change the intent or terms of the lease or impose undue constraint upon the leaseholder.

For new leases, broad constraints to minimize impacts can be applied as lease stipulations, which govern how operations are conducted or where they can be located.

### Existing Leases

Various private entities hold valid federal leases for oil and natural gas on the Jicarilla Ranger District of the Carson National Forest. Currently there are 126 existing leases on approximately ninety-eight percent (150,554 acres) of the district that are leased for fluid minerals. These leases, many dating back to the 1950's and 1960's, have created contractual rights allowing companies to develop oil and natural gas resources subject to the stipulations identified in the lease. The vast majority of these existing leases were leased with few or no stipulations added to address surface resource impacts. These leases do not expire as long as they are producing oil or natural gas and held in production by the leaseholder. Most of the existing leases were issued prior to the passage of the National Environmental Policy Act (1970), the release of the Carson Forest Plan (1986) and the 1987 Leasing Reform Act.

The developments associated with the existing leases include over 800 existing gas well, including those that have been plugged and abandoned, over 400 miles of associated access roads, pipelines, compressor stations, injection wells, and other facilities that have been developed on the Jicarilla Ranger District.

Due to anticipated future development on the Jicarilla Ranger District over the next 20 years, which has been forecast by the RFDS to be approximately 700 new wells, there is a need for:

- Evaluating and determining how to facilitate the orderly development of energy resources in the area, while minimizing disturbance to surface resources and uses;
- Disclosing the potential cumulative impacts of implementing the RFDS;

- Ensuring current standards and guidelines are representative of existing conditions including existing mineral leases and outstanding mineral rights;
- Establishing whether additional direction (new standards and guidelines in the Carson Forest Plan) is necessary for the management of oil and gas development on the Jicarilla Ranger District.

### *New Leases & Stipulations*

Presently there are approximately 2,500 acres on the Jicarilla Ranger District not leased for mineral development and extraction. There is a pending request from the BLM to offer for lease a portion of these lands. Additionally as other lands become available in the future through termination, expiration or relinquishment of an existing lease they may be made available for mineral development under new leases. Therefore there is a need for:

- Identifying stipulations and conditions that would be applied to all new leases, including those that are pending, currently unleased, and any existing leases that become available in the future for leasing.

Since most of the Jicarilla Ranger District is currently leased, the desired condition for the Jicarilla Ranger District must recognize the leaseholders' existing rights to drill for, extract, remove and market gas products. With consideration of lease holder rights, the desired condition for the Jicarilla Ranger District is to provide the access needed to reach gas resources and meet energy needs of the Nation, while (1) productivity of the land for other uses is sustained, (2) biodiversity is supported, (3) cultural resources are protected and preserved, (4) long-term health of the ecosystem is maintained and, (5) the quality of life for local residents and Forest users is not impaired on or near the Jicarilla Ranger District. Specifically, the Forest wants to reduce the impact from the development of oil and gas operations, as much as possible, on surface resources.