Day 3. Wednesday, August 13, 2003: LightHawk Flyover

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LightHawk Flyover: Oil & Gas, Coal, Coalbed Methane

LightHawk Flight Route

LightHawk Flight Route Map (to be provided)

LightHawk Flight Highlights

LightHawk Waiver and Release of Liability

LightHawk Passenger Trip Report


*Enzi, Thomas push for coal development along with gas*, Billings Gazette, Ted Monoson, June 27, 2003


San Juan Generating Station factsheet, PNM web site [http://www.pnm.com](http://www.pnm.com)

Four Corners Power Plant factsheet, SRP web site [http://www.srpnet.com](http://www.srpnet.com)
Company Facts

BP in the San Juan Basin

The San Juan Basin, located in southwest Colorado and northwest New Mexico, contains one of the largest natural gas deposits in the United States. It covers an area of 6,500 square miles from near Cuba, NM, in the southeast, to Farmington, NM, on the west and near Durango, CO on the north.

Although the basin has a long history of oil and gas development dating back more than 75 years, total natural gas produced here has greatly increased following advancements in Coalbed methane production technology beginning in the 1980s.

BP is the largest gas producer in the Colorado portion of the basin and second largest producer in the New Mexico portion.

Colorado: 650 mmcf/d from 1,000 BP wells
New Mexico: 250 mmcf/d from 2,100 BP wells
Total: 900 mmcf/d from 3,100 BP wells

National perspective: All total, natural gas demand in the US averages between 60 and 65 billion cf/day depending on seasonal and economic factors. The latest industry figures show US production (Onshore, Gulf of Mexico and Alaska) at 52.8 bcf/d. Most of the difference has been made up by natural gas produced in Canada, although Canadian production is now in decline.

For BP, natural gas production in the US totals 3.4 bcf/d, with the San Juan Basin accounting for about 26 percent all the gas BP produces in the US. Coalbed methane accounts for 75% of the natural gas BP produces in the basin, with the remainder from conventional gas wells.
BP is a Responsible Operator: Unlike Coalbed methane operations elsewhere, BP reinjects in the ground all of the approximately 43,000 barrels per day of the water produced from gas operations in the San Juan Basin. Of equal importance, produced water is not taken from local drinking water aquifers, and to assure neighbors their water is not impacted by BP operations, the company routinely tests drinking water wells near all its gas wells.

More about BP in the San Juan Basin: There are 230 BP employees in the basin with an additional 80 employees supporting operations in the basin from BP’s offices in Houston.

In 2003, BP expects to drill between 80 and 100 new wells in the San Juan Basin, about evenly split between Colorado and New Mexico, at an expected capital outlay of $88 million. The company plans to maintain this pace of new wells drilled for the next two to three years.

Elsewhere: BP has important US natural gas production operations in Wyoming, Kansas, Oklahoma, Arkansas, Texas and Louisiana as well as in the Gulf of Mexico and Alaska. The company also produces natural gas from wells in Alberta, Canada.

BP is a global producer, manufacturer and marketer of oil, natural gas and a variety of petroleum products. It has operations in 100 countries around the globe and employs nearly 120,000 people in providing energy and services while remaining dedicated to its core values of innovation, outstanding performance, progressive outlook and environmental responsibility.

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150 New Gas Wells Planned for HD Mountains Roadless Area
San Juan National Forest

The San Juan National Forest is presently analyzing a proposal to drill 297 new coalbed methane gas wells near Bayfield. About half of these are located within the 40,000-acre HD Mountains Roadless Area. The HD Mountains are rugged foothills of the San Juan Mountains near Durango, and were named for the 19th century Hatcher-Dyke cattle company brand.

This proposal has generated immense public controversy. Hundreds of area residents attended public hearings and submitted comments last year objecting to the proposal.

Why are people concerned?
The HD Mountains contain some of the last remaining stands of unlogged, old-growth ponderosa pine in the San Juans, including many trees more than 300-years old. The drilling proposal will completely destroy three proposed old-growth ecological research areas.

The HD Mountains contain at least 100 ancient, undamaged pre-Puebloan (Anasazi) cultural sites in the Spring Creek National Historic District, and hundreds of additional sites within a stone's throw of the Chimney Rock Archeological Area.

Road construction will destroy the area's value for backcountry hunting, horse riding, hiking, and other primitive recreation pursuits. The drilling plan will eviscerate the 40,000-acre HD Mountains roadless area. Road construction and compressor plants will wipe out the area's value as critical winter range for mule deer and elk, and disturb prime habitat for wild turkey, black bear and other wildlife.

The HD Mountains are the source of numerous springs that sustain area farms and ranches, in addition to wildlife. CBM drilling has destroyed water sources elsewhere in La Plata County.

Recent monitoring indicates that area communities, including Farmington, New Mexico, are at the threshold of the ozone health standards. Thousands of new compressors associated with CBM wells are anticipated to push communities over this health threshold.

Who is concerned?
Local opposition to drilling in the HD Mountains is widespread, and includes outfitters and guides, neighboring landowners, farmers and ranchers, backcountry horse users, archeologists, hikers, hunters and area residents. La Plata County Commissioners have unanimously requested the Forest Service analyze horizontal drilling and other less destructive approaches.

A low impact alternative could include horizontal drilling from existing roads, maintaining the existing 1.5-mile regulatory setback from Fruitland Formation outcrop (to prevent methane seeps and underground coal fires), and avoiding new roads within the roadless area while still allowing extraction of most of the gas under the HD Mountains.
Hot-Button Issues

Air Quality Modeling
Last year, the San Juan National Forest raised significant concerns about air quality analysis in the adjacent BLM Farmington land use plan's proposal for 10,000 new gas wells. The Forest Service noted possible severe major impacts to visibility in the Weminuche Wilderness Area, an area designated Class I under the Clean Air Act.

When Farmington BLM ignored the Forest Service's concerns, San Juan NF in May, 2003 proposed to write additional comments. This would have taken the form of a formal "protest" of the BLM's land use plan. Such action is almost unprecedented among federal land management agencies. Under intense pressure, San Juan NF reneged and agreed instead to future collaborations with Farmington BLM on appropriate modeling approaches.

Because of the San Juan NF's experience with Farmington BLM's inadequate approach to air quality analysis, Colorado proposes to undertake a more vigorous analysis of cumulative air quality impacts that incorporates all pending development projects in the San Juan Basin as part of the HD Mountains EIS.

Horizontal Drilling
In response to formal requests by numerous interested parties, the San Juan NF agreed earlier in 2003 to analyze horizontal drilling as an alternative in the HD Mountains EIS. Requests for this analysis came from La Plata County Commissioners, Rep. Scott McInnis, industry, and local residents. In June, the BLM's Colorado State Office and Forest Service's Rocky Mountain Regional Office stepped in and vetoed analysis of a horizontal drilling alternative in the EIS.

Horizontal drilling technology is readily available. At least one Durango company, CDX Gas, has already drilled horizontal wells next to the HD Mountains. A horizontal well was drilled by Williams on the Carson NF in adjacent New Mexico. By refusing to analyze a proven technology in the EIS, the agencies are skewing decisions against more environmentally benign approaches to extracting CBM.

Contractor's Performance
In January, 2003, the private contractor employed to write the Northern Basin EIS returned a preliminary draft to the San Juan NF for review. It was roundly panned by agency reviewers. Greystone is the same contractor given a failing grade by EPA on the Powder River Basin EIS in Wyoming.

The San Juan NF planning team drafted a memo to Greystone describing the agency's disappointment with Greystone's performance. It includes such damning quotes such as "Most environmental consequences sections lack deductive reasoning, knowledge of CBM impacts, knowledge of the project area, and quantification of impacts." This raises significant concerns among the public about the competence of environmental studies, and about the consequences of accelerated environmental reviews.
HD Mountains Roadless Area, San Juan National Forest

200+ Proposed Coalbed Methane Gas Wells
SAN JUAN BASIN WELLSITES

- Line
- Methane Gas Wells (Black dots)
- All Other Wells (Red dots)

Fruitland Coal Bed Perimeter
HD Mountains Roadless Area