Testimony of Charles E. Greenhawt, Manager, Government Affairs, Questar Exploration and Production Co., representing Questar Corporation. Prepared for The Committee on Natural Resources Hearing entitled "Access Denied: *The Growing Conflict Between Fishing, Hunting, and Energy Development on Federal Lands"*, Tuesday March 27, 2007.

Chairman Rahall, Ranking Member Young, members of the Committee, I want to thank you for the invitation to appear today. My name is Chuck Greenhawt and I am the Manager of Government Affairs for Questar Exploration and Production Company. I have been an employee with Questar for 22 years and I have had the opportunity to be involved in numerous aspects of the natural gas business. With my years of employment in the natural gas business, I have seen natural gas development continually decrease its impact on the land and environment.

As I begin my remarks, let me clearly state that, with today's technology, exploration for, and the production of, natural gas is a compatible use with hunting and fishing on most public lands. Western rangelands are suffering the effects of prolonged drought, and other natural phenomena that have negatively affected wildlife habitat. Natural gas operations have little impact compared to these overarching natural concerns. Natural gas operators can and do manage their operations responsibly and importantly take actions that not only mitigate their impact, but also assist wildlife managers as they work to restore habitat.

Questar, through its subsidiaries, Questar Exploration & Production Co. and Wexpro Co., is an independent operator of natural gas exploration and production facilities. We operate in the Rocky Mountain and Mid Continent regionsof the United States. Questar started in the exploration business with a natural gas discovery in Sweetwater County, Wyoming in 1922. Our operations have been a part of the Wyoming and Rocky Mountain landscape ever since. We not only produce natural gas, but we also engage in the transportation of natural gas through our pipeline subsidiary, Questar Pipeline Co. and we distribute gas as a utility to over 850,000 customers in Utah, Idaho and Wyoming through our retail distributor, Questar Gas Co. We are typical of most producers in the West. We are not a "major" and we don't operate in foreign countries or offshore. Questar and its employees are tied to the land on which we operate. We hunt, fish, and otherwise enjoy the public lands of the West.

Because we also operate a retail utility, we readily understand the importance of the natural gas resources in the Rocky Mountains. We understand the value of these supplies to our customers and the nation. Often lost in the debate about energy development on public lands is the real cost to consumers if we economically disadvantage this production and become more reliant on imported foreign natural gas with its related concern of energy security.

I have personally spent much of my career working for our utility; often dealing with the concerns of low-income customers whose natural gas bill was a significant burden to their budget. We sometimes forget that public land policy affects millions of consumers who likely will never hunt, fish or otherwise use our public lands. But these consumers depend on the natural resources produced on public lands for affordable heat, power and the manufacture of everyday products they consume.

It is important, that companies like Questar and the other independent operators in the West, economically find and produce these needed resources. As citizens of the West; we certainly understand and agree with the need to do so compatibly with the recreational, agricultural, and other users of public lands.

I am going to focus my testimony on Questar's largest single field development, which is located on what is known as the Pinedale Anticline in Sublette County, Wyoming. I am focusing on Pinedale because of the extensive attention this project has received concerning wildlife populations and habitat. The Pinedale development also illustrates the unique characteristics of what is known as unconventional natural gas. Unconventional or "tight sands" gas has turned the Rocky Mountains into the nation's most promising future resource for natural gas and the only domestic basin where gas supplies are increasing. The Pinedale Anticline field has gone from almost no production to become the nation's second largest natural gas field in less than ten (10) years. The Anticline has enough known reserves of natural gas to supply ten million homes annually for over 30 years.

Questar's involvement in Pinedale started in 1963 when Questar, then known as Mountain Fuel Supply Co., drilled its first well in the area under a farmout from other operators that had held the federal oil and gas leases in the area since the early 1950's. In the early 1980's Questar drilled two additional wells that confirmed the presence of a gas accumulation but the technology of the time did not allow them to produce significant volumes of gas. Hence, the Anticline had very little drilling activity by Questar or others until 1997 when the first modern wells were drilled using new techniques to apply multiple fractures to the tight sands. Wells completed using this new technology began yielding significant amounts of production. Questar and others commenced drilling programs using the new technology.

The majority of Questar's current acreage holdings are subject to the original early 1950's leases, which, typical of the era, contained no special provisions concerning wildlife. I believe it's fair to say that in those days, hunters in particular, probably welcomed oil and gas development, since it created access roads for their subsequent use. Conventional production was usually spaced at one well every 160 to 640 acres. In contrast, today tight sands production more likely requires 5 to 80-acre downhole spacing to adequately recover the resource. As with the vast majority of public lands in the Rockies, the Pinedale Anticline is predominantly sagebrush, which antelope, deer, and sage grouse frequent. Understandably the changed times and changed methods of exploration caused the BLM and the State agencies to re-think the 1950's era leases without any wildlife stipulations.

In 1998, the BLM undertook a review of the renewed activity at Pinedale and on July 27, 2000, after conducting an Environmental Impact Statement, issued a Record of Decision that included numerous wildlife provisions and stipulations. The stipulations followed typical BLM policy that focused on seasonal drilling restrictions designed to protect breeding seasons and wintering big game.

Attached as Exhibit I, is a list of 103 provisions and stipulations contained in the 2000-ROD designed to protect wildlife. As you can see, is the list is very extensive. At the same time Questar and other operators commissioned studies designed to measure the impact of the exploration and production activity on wildlife and the effectiveness of the lease stipulations.

It should be noted that at this same time, the Anticline, as well as the West in general, started to suffer from drought, which continues through today. Droughts and other ever-changing natural conditions make it very difficult to measure the impact from any one activity, such as the exploration and production at Pinedale. Nonetheless, Questar, the BLM, the Wyoming Game and Fish, and others were quickly aware that the seasonal restrictions were having unintended, non-wildlife consequences and that there were likely more effective measures to protect wildlife and their habitat. For example, the seasonal restrictions condensed most activity to a few months in the summer and early fall. This caused a large burst of activity followed by a long lull. This boom and bust cycle had a significant negative seasonal impact on the small town of Pinedale and greatly extended the number of years that would be needed during the more intensive drilling phase as well as adding to the total life of the project through production.

In 2004, Questar proposed a revised plan for its operations to address the unintended consequences and to capitalize on the lessons being learned from the wildlife studies and technological advances in the field. The plan was developed after an extensive outreach effort we called the Neighbor-to-Neighbor program. Questar met and consulted with hundreds of individuals, wildlife and sporting groups, government agencies and local officials. With their help, a better approach was formulated.

In short, Questar proposed to spend over $200 million incremental dollars to further mitigate the effects of its operations and to switch to year-round versus seasonal operations. Year-round operations provide economic benefits to help fund mitigation while simultaneously decreasing the total years of drilling activity. In its comment letter to the BLM, the Wyoming Game and Fish Department concluded:

"In total, then, if several decades of significant year-round production **disturbance can be avoided** by [emphasis added] allowing a one-year seasonal disturbance during development, the benefits to wildlife are much greater." (The entire letter is attached as Exhibit 2.)

One of the key components of the Questar plan was to reduce the footprint of the drilling activity by directionally drilling multi-well pads. The 2000-ROD would have allowed Questar to drill its wells from approximately 150 separate pads. Through the use of directional drilling and multi-well pads, Questar proposed to cut the total number of pads to 61. As knowledge about gas reservoir increased, Questar and other operators found that more wells would be needed to fully recover the resource. This downspacing increased density would normally have increased the surface disturbance with the addition of new well site pads. Questar was able to accomplish increased density without the need for any new pads by utilizing directional drilling. Importantly, the total number of pre-reclamation acres disturbed declined from 1475 acres under the 2000-ROD to 533 acres under the Questar proposal.

Wildlife studies being funded by Questar and others were indicating that perhaps the most significant impact to wildlife was being caused by the amount of human activity required to operate the producing well locations. Several measures were proposed to address this, but the most significant was building a pipeline system to gather the water and natural gas liquids produced in association with the natural gas. This required a $50 million investment, but has already eliminated 16,925 tanker truck trips on the Anticline in its first 16 months of operation, and is expected to eliminate over 25,000 trips per year from Questar's activities as more wells are drilled. The other major Anticline operators

are now designing an expanded liquids pipeline system, which together with Questar's, would eliminate up to 165,000 truck trips annually.

The last component of the Questar plan that I will discuss is the commitment to both onsite and offsite reclamation and habitat improvement. On lease, the plan not only reduced the total disturbed acreage, but also committed Questar to interim reclamation of the pads as drilling progressed. Additionally, Questar initiated a 300-acre habitat improvement project, a base line habitat inventory, and continues to fund long-term wildlife studies and other efforts to improve range conditions.

This is a snapshot of numerous efforts Questar has undertaken to make its Pinedale project the most compatible it can be with wildlife and sportsmen's interests. In fact, our studies indicate that these measures are working and are clearly more effective than the seasonal restrictions contained in the 2000-ROD. Future operations on the Anticline will be even more wildlife friendly as the major Anticline operators coordinate their drilling activity in concentrated areas leaving more open space for wildlife, **eliminating 165,000 truck trips per year** through expanded liquids pipelines, make an almost total commitment to directional drilling to reduce footprint and leave more open space for wildlife and make extensive use of interim reclamation methods.

In total, the mitigation planned by the operators for wildlife and other environmental concerns will **exceed one billion dollars for this one natural gas field**. It will leave 92% of the Anticline undisturbed by development while ultimately supplying enough domestic natural gas to supply ten million US households for over 30 years. This type of development benefits both the wildlife and consumers. It enables responsible operators to produce more natural gas, which is relatively affordable and environmentally friendly, while the country makes its transition to the renewable fuels of the future

We call this sustainable development. It's very expensive and the methods employed in Pinedale may not be the methods feasible or necessary in other areas where the geology and economics are different and the wildlife needs are different.

I would like to add a few remarks specific to the importance of hunting and fishing to the economy of a state like Wyoming. I am a Wyoming resident. Tourism is Wyoming's second largest industry. Both hunting and fishing and the oil and gas industry contribute to the tourism industry. For example, many motel rooms and restaurant meals are attributed to oil and gas activity as well as hunters and fishermen. Recently, I have seen articles that imply that oil and gas activities on public land are negatively impacting the important tourism industry and its contribution to Wyoming's economy. In reality both are important and as I stated at the outset of this testimony; compatible. While tourism is important, wish as one might, it will not soon become more important to an economy like Wyoming's than mineral development. This is just not within realistic sight. In 2006, mineral revenues accounted for about 70% of Wyoming's normal budget and the industry is clearly the largest driver of Wyoming's economy. During the past five years, the Wyoming Business Alliance estimates that two thirds of all new Wyoming jobs have come directly or indirectly from the mineral industry. Natural gas production is the largest sector of the mineral industry. Wyoming must maintain a healthy and responsible natural gas development industry that coexists with the interest of sportsmen and the tourism industry.

While it may be impossible to avoid some temporal impact from natural gas development activities, we must balance this temporary impact with the real need for

natural gas, which is a clean burning, domestically produced energy source and the most logical bridge to a renewable energy future. As an industry, we are constantly improving our practices and utilizing technological advances to mitigate what impact we have to public lands, which allows us to be very compatible with the interests of sportsmen such as hunters and fishermen. I am certainly proud of the extraordinary and extensive efforts that Questar has taken at Pinedale and hope that the Committee finds our example helpful as you study this important issue. I want to end with this, Questar and many other operators are very involved in the communities where they operate, and employ a large number of citizens in well-paying jobs. By establishing these relationships, we continue to understand the needs of these communities and their citizens. We want to be good neighbors and have long lasting relationships. I would like to extend an offer to the other witnesses here today to meet and work out whatever issues we may have, so we can come away with meaningful solution that will help sportsmen, the natural gas industry, and the American public.