STATE OF COLORADO

OFFICE OF THE EXECUTIVE DIRECTOR
Department of Natural Resources
1313 Sherman Street, Room 718
Denver, Colorado 80203
Phone: (303) 866-3311
TDD: (303) 866-3543
Fax: (303) 866-2115

COLORADO DEPARTMENT OF NATURAL RESOURCES

Bill Ritter, Jr.
Governor

Harris D. Sherman
Executive Director

July 30, 2008

Hand-delivered and sent via first-class mail

Sally Wisely
Colorado State Director
Bureau of Land Management
2850 Youngfield Street
Lakewood, Colorado 80215

Re: Protest of BLM's August 14, 2008 sale of parcels in the Roan Plateau Planning Area

Dear Director Wisely,

As you know, the State of Colorado supports the extraction of the valuable gas resources beneath the Roan Plateau in a thoughtful, measured way. However, we believe that the Bureau of Land Management's (BLM) plan for leasing the Roan next month has serious flaws that must be addressed before a lease sale occurs. The BLM's plan fails to protect valuable fish and wildlife habitat, will not maximize economic return to the State, and could result in the State not receiving its share of mineral bonuses and royalties. The State of Colorado has tendered a plan for the Roan that would accomplish these goals, and this plan has received widespread support from around the State. Nonetheless, the BLM has rejected the State's proposals, and we have no choice but to object to the BLM's leasing plan.

Therefore, on behalf of the State of Colorado, I hereby submit this protest of the decision by the BLM to lease the following parcels of public land in the Roan Plateau Planning Area (Roan Plateau) in Garfield County, Colorado on August 14, 2008:

COC73064, COC73065, COC73066, COC73067, COC73068, COC73069, COC73070, COC73071, COC73072, COC73073, COC73074, COC73075, COC73076, COC73077, COC73078, COC73079, COC73080, COC73081, COC73082, COC73083, COC73084, COC73085, COC73086, COC73087, COC73088, COC73089, COC73090, COC73091, COC73092, COC73093, and COC73094.

The State of Colorado has been an active participant throughout the BLM's planning effort for the Roan Plateau. The Colorado Department of Natural Resources (Department) reviewed the Resource Management Plan (Plan) approved by the BLM for the Roan Plateau and, in particular, the natural gas leasing and development authorized by the Plan. Based on this review, we have determined that leasing of the Roan Plateau under the current Plan is not in the best interests of the State of Colorado, and, for the reasons set out below, I protest the BLM's sale of these parcels.

The future leasing and development of natural gas beneath the Roan Plateau raises a host of complex and controversial issues and has prompted vigorous public debate. This controversy and debate underscore the extraordinary and sometimes conflicting values at stake:

- An abundant energy resource that can help to maintain our current quality of life and transition us to a cleaner energy future;
- A unique biological and ecological resource that includes regionally significant fish and wildlife populations and habitat;
- A valuable economic resource that offers badly needed funding for state programs; and
- An important recreational resource that provides hunting, fishing, and other outdoor opportunities to the public.

It is imperative that the Roan Plateau be managed in a manner that best integrates and furthers these values, not just for our present population, but for future generations as well. Such management should establish a new standard for energy development, one which balances resource development with environmental and wildlife preservation, sustains and furthers our economy, and encourages technological innovation.

To this end, the Department reviewed the Plan and consulted with officials and staff at the Colorado Geological Survey, the Colorado Oil and Gas Conservation Commission, the Colorado Division of Wildlife, the Colorado Department of Local Affairs, and the Governor's Office of State Planning and Budgeting. We inspected the Roan Plateau and visited gas development sites throughout the Piceance Basin. We consulted with BLM staff, oil and gas companies, drilling experts, natural resource economists, environmental groups, and wildlife organizations. We reviewed current gas leasing, development, and pipeline information. And we secured information on the relative economic benefits from different leasing and development scenarios. Our review of this information has been deliberate and thorough, and it has confirmed the importance and complexity of the values at stake.

Based on this work, we have concluded that the natural gas resources beneath the Roan Plateau are simply too valuable to ignore, and we believe that these resources can and eventually should be developed in a responsible and financially beneficial manner. However, we have also concluded that the Roan Plateau contains unique ecological and biological resources, and we believe that these resources warrant additional protection. In considering additional protective measures for this purpose, we sought to accomplish five primary goals:

1) **Develop the natural gas resource.** Though the amount of recoverable gas is yet to be conclusively determined, the Roan Plateau is by all accounts an extraordinary

energy resource. The BLM estimates that 4.2 trillion cubic feet (TCF) of natural gas lie beneath the top of the Roan, and that an additional 4.7 TCF lie beneath the cliffs and below the rim. This would be enough gas to supply all current residential customers in Colorado for a period of approximately 34 years. The area thus presents a significant opportunity to help meet energy needs on a state, regional, and national level.

2) **Protect the extraordinary natural values of the Roan Plateau.** These values include the Roan's environmental and wildlife resources and its aesthetic values and outdoor uses. The Roan Plateau presents one of the last intact and relatively undeveloped areas of its size in northwestern Colorado. It contains genetically pure Colorado River cutthroat trout, as well as deer, elk, black bear, puma, bald and golden eagles, peregrine falcons, ring-tailed cats, boreal and long-eared owls, sage grouse, blue grouse, and wild turkeys. The only three other areas in Colorado with comparable diversity are already protected. This area, in our view, likewise deserves additional protection to maintain these values.

3) **Maximize the economic return to the State of Colorado.** Because federal receipts for extraction of federal gas resources are typically split equally with the State, the development of the resources beneath the Roan offers a potentially significant source of State revenue. This would first require amendment of the federal law transferring ownership of the Roan Plateau from the Department of Defense to the Department of Interior, which the State believes is a precondition to leasing the Roan, as discussed below in Section III. Due to the potentially significant economic return to the State, we believe that we have a responsibility to ensure that the area is developed in a manner that will maximize these revenues for current and future residents. Given the magnitude of the gas resource, relatively modest bonus increases could amount to tens of millions of dollars or more in funding for education, roads and infrastructure, water development, and other essential government services.

4) **Provide for a sustainable, long-term economy.** Western Colorado is in the midst of an unprecedented natural gas boom and facing an equally unprecedented level of potential oil shale development. According to a recent study conducted for the Associated Governments of Northwest Colorado, the population in Mesa, Garfield, Rio Blanco, and Moffat Counties will double in the next 30 years due to the boom in natural gas drilling, with an additional 50,000 people coming to the area if oil shale development gets off the ground.[1] Smaller historic booms have been followed by busts that caused economic hardship and dislocation. We wish to avoid this boom-bust cycle, promote a more stable and sustainable natural gas economy, and continue our efforts to diversify the regional economy.

5) **Encourage improvements in technology.** Significant improvements are occurring every day in gas drilling and development, and we owe it to ourselves and future generations to utilize and promote these advancements. Directional drilling, for example, allows companies to recover more gas at less cost and with less impact to

---

[1] *See* "Northwest Colorado Socioeconomic Analysis and Forecasts: Socioeconomic Forecasts," BBC Research & Consulting, at IV-15 & V-8 (April 4, 2008), *available at* http://agnc.org/reports.html.

the environment. We expect state-of-the-art practices to be utilized on the Roan Plateau, and we believe that evolving technology can help further all of the State's goals for the Roan.

To meet these goals, the BLM Plan requires clarification and refinement. As I wrote in December, the lands that the Plan identifies as Areas of Critical Environmental Concern (ACEC) are inadequate to protect the extraordinary natural resources, fish and wildlife habitat, and ecological systems found on the Roan Plateau. In addition, the Plan allows the entire 34,000-acre top of the Roan to be offered immediately in one lease sale, as the BLM intends to do on August 14. In the Plan, however, the BLM did not evaluate how this approach would affect revenues to the federal and state government, a serious flaw in the Plan and the Record of Decision. We have determined that leasing the entire top of the Roan under BLM's plan would be tantamount to giving away more than half of the bonus payments for the gas reserves. This dramatic decrease in the State's economic return is unwarranted and unacceptable. Moreover, this approach would do little or nothing for future generations and would limit BLM's ability to require future development to take advantage of the latest technological advancements.

Accordingly, I am protesting the BLM's August 14 sale of the above-referenced parcels in the Roan Plateau Planning Area, and I request that the BLM clarify the Plan in two respects prior to offering any parcels of the Roan Plateau. First, as I wrote in December, the BLM should expand ACECs to include those areas contained in Alternative II of the Plan, which will protect the high value wildlife, fish, and plant communities on top of the Roan and protect valuable big game winter range below the rim, particularly for mule deer. To ensure that these larger ACECs do not constrain development, we propose a buffer area along ridge-top roads outside of sensitive trout habitat in which development might occur. This would allow for 82% or more of the natural gas beneath the Roan to be reached using existing directional drilling technology. With future technological advancements, we believe that substantially all of the recoverable natural gas can ultimately be extracted. Second, the BLM should implement a phased leasing approach, leasing each ridge on top of the Roan separately and sequentially. This should more than double the State's economic return from the leasing process, increasing the State's share of the lease bonuses by the equivalent of $200 million or more in present value. It should also help to extend the duration of the economic benefits so that they assist future as well as present Colorado residents, and it should further protect ecological values by enabling BLM to require lessees to use the best technology available at the time each ridge is leased. The details of these proposals are set out below. Finally, the BLM should not lease the Roan Plateau area until the federal Transfer Act is amended to allow the State to receive its share of lease bonuses and royalties. Under current law, the State will receive nothing from Roan revenues, despite the fact that it will bear the burden of addressing the resulting impacts and infrastructure needs.

The State of Colorado has the responsibility of protecting the important fish and wildlife resources and ecological values on the Roan Plateau while maximizing the economic return to its citizens for the development of resources within the state. Enlarged ACECs and phased leasing are necessary to meet these obligations, and amendment of the Transfer Act is necessary to ensure that the State gets its share of Roan revenues. Because the BLM's Plan for the Roan Plateau does not include these concepts, the State of Colorado hereby protests the August 14 lease sale of parcels COC73064-COC73094.

We believe that BLM can refine and clarify its Plan to incorporate these suggestions without formally amending the Plan. We understand, however, that the BLM does not agree with this assessment. Because the BLM believes a Plan amendment would be necessary and yet is unwilling to amend the Plan, it is apparent that the driving force behind the effort to lease the Roan next month is the November elections. Given the resources at stake, the plan for the Roan must serve future generations, not political timelines. It is vitally important that leasing and development of the Roan be done right. Acceptance of leasing under the Plan as it is currently written would violate the State's duty to its citizens and future generations of Coloradans. In the absence of provisions implementing the Colorado plan for the Roan, I have no choice but to formally object to leasing the Roan Plateau on August 14.

I. The BLM's Plan Must Protect Valuable Habitat for Fish and Wildlife

The biological and ecological attributes of the Roan Plateau are well documented. The ecological diversity of the Roan is unique, due to the topographical extremes found within the planning area as well as the Roan's location near the boundary of the Colorado Plateau and the Southern Rocky Mountain geologic provinces. The planning area supports regionally important habitat for mule deer and Rocky Mountain elk, the most intensively managed and sought-after big game species in Colorado. The top of the Roan also supports several special status fish species, including genetically pure populations of the Colorado River cutthroat trout. All involved in the Roan debate agree that it is ecologically unique, a truly special place.

The BLM Plan identifies ACECs where surface-disturbing activities are prohibited to protect the extraordinary natural resources and natural systems found on the Roan Plateau. On March 26, 2008, the BLM announced its final decision for the management of four ACECs within the Roan Plateau. *See* 73 Fed. Reg. 16057 (March 26, 2008). The current ACECs, however, are inadequate to protect all of the valuable fish and wildlife habitat within the Planning Area. We believe the BLM's Plan and ROD for the Roan Plateau are deficient in their failure to adequately protect the critical fish and wildlife habitat within the planning area. The BLM should extend the ACECs to encompass additional areas that will fully protect the watershed values and important big game winter range and Colorado River cutthroat trout habitat on the Roan Plateau.[2] As explained below, doing so would not interfere with development of the natural gas resources beneath the Plateau.

A. Fish and Wildlife Habitat Values on the Roan Plateau

The Colorado Natural Heritage Program's (CNHP) *Biological Survey of the Naval Oil Shale Reserve No 1, Final Report* (1996) documents the rich diversity of species of the Roan Plateau. The CNHP found 17 significant plant communities, 24 species of special concern, genetically pure strains of Colorado River Cutthroat trout, deer, elk, black bear, puma, bald and golden Eagles, peregrine falcon, northern harrier, Coopers hawk, boreal and long-eared owls, black swift, purple martin, three-toed woodpecker, ring-tailed cat, sage grouse, blue grouse, wild turkey, and other wildlife species. Further, the CNHP report states, "[w]e are aware of only three other Colorado areas which compare to the richness of the Roan Plateau's rare flora and fauna.

---

[2] On June 11, 2007, the BLM announced that its Record of Decision on the Roan did not apply to its designation of ACECs in the planning area, and it solicited additional public comment on the four ACECs proposed in its Plan for the Roan, pursuant to 43 C.F.R. § 1610.7-2(b). *See* 72 Fed. Reg. 32,138 (June 11, 2007).

All three of these areas (Colorado and Dinosaur National Monuments and Mesa Verde National Park) are federally protected lands."

The biological and ecological attributes of the Roan Plateau Planning Area are further documented in several BLM documents, including BLM's *ACEC Management Considerations* (Dec. 2002), *ACEC Amendment Evaluation* (Aug. 2002), and *Wild and Scenic River System Eligibility Report* (Sept. 2002). These reports provide detailed findings about the regionally and globally significant ecological and biological resources of the Anvil Points, Magpie, East Fork Parachute Creek, and Trapper/ Northwater areas, and they recommend that surface activities be restricted in areas corresponding to the ACECs in Alternative II of the BLM Plan.

For areas atop the Plateau, the *ACEC Amendment Evaluation* (Aug. 2002) report explains the need to protect high value watershed processes for fisheries and plant communities found in the East Fork of Parachute Creek and the Trapper/ Northwater ACECs. Any degradation of these watershed processes, it found, could imperil the Colorado River cutthroat trout populations on the Roan Plateau. The *ACEC Amendment Evaluation* and the BLM Plan both conclude that,

> Given the results of the DNA analyses, the Roan Plateau populations of Colorado River cutthroat trout are considered nationally and regionally significant. The Roan Plateau contains one of only a few remaining watersheds where genetically pure, reproducing populations of Colorado River cutthroat trout are found in all streams capable of sustaining a fishery. Maintaining or expanding these populations would play an important role in the overall recovery of this subspecies.

See RMPA/EIS at 3-64. Further, the Department has made clear that "the loss of any of the CRN populations atop the plateau [would] be an undue and unnecessary impact." *See* CDOW, April 2005.

B. Analysis of BLM's Plan for ACECs

The Department's 2005 proposal to BLM for management of the Roan was predicated upon protecting these ecological and biological resources through designation of 36,184 acres of ACECs with corresponding NSO stipulations. One of the basic compromises inherent to the Department's 2005 proposal for the Roan was that leasing 100% of the natural gas resource could be supported only if the ACECs as geographically delineated in Alternative II of the Plan were protected with an NSO lease stipulation.

Though the Plan acknowledges the important resource values in these ACECs, it inexplicably and dramatically decreases them in size from 36,184 acres to just 21,034 acres: Anvil Points ACEC is decreased from 10,226 acres to 4,955 acres; Magpie Gulch ACEC is decreased from 5,885 acres to 4,698 acres; East Fork Parachute Creek ACEC is decreased from 9,777 acres to 6,571 acres; and Trapper/Northwater Creek ACEC is decreased from 10,296 acres to 4,810 acres. As decreased in the Plan, these areas represent just 58% of the area previously recommended by the Department and delineated by BLM in 2002 as necessary to protect biological and ecological resources. Only the Magpie ACEC remains substantially as recommended by the Department.

Under the present BLM proposal, the ecological and biological values of the East Fork of Parachute Creek and Trapper/ Northwater ACECs are protected by providing an NSO stipulation only to the "high" and "moderate" risk Colorado River cutthroat trout habitat. The "high" value watershed processes for Fisheries and Plant communities would instead be covered by Controlled Surface Use stipulations. The acreage reduction in the Anvil Points ACEC forgoes NSO protection of a large unroaded portion of important wildlife habitat below the rim. The BLM excludes these areas from the ACECs because they contain about 2,500 acres of existing leases. This existing lease information, however, was factored into the initial boundary review and evaluation process in the BLM's *ACEC Management Considerations* (Dec. 2002), which recommended that the leased areas be included in the ACEC. Moreover, the BLM has affirmed its ability to assert this level of protection on existing leases with the use of mitigation plans tied to Applications for Permit to Drill (APD). *See* Glenwood Springs Field Office, RMP Amendment for Oil and Gas Leasing and Development (1999), FEIS at 2-28. In this way, the BLM reduced by about 25 square miles the area deemed necessary to protect the visual resources, aesthetic values, wildlife habitat, botanical values, ecological values, and fisheries habitat of the Roan Plateau.

C. <u>Colorado Solution</u>: Protect Valuable Fish and Wildlife Habitat with Larger ACECs

We propose that BLM extend the ACECs to encompass all 36,184 acres previously contemplated. The additional acreage below the rim in the Anvil Points and Magpie Gulch ACECs is necessary to protect valuable and imperiled big game winter range, particularly for mule deer. Because much of the development at the base of the Plateau is on private lands, measures to preserve habitat on BLM land are all the more important. With directional drilling, the extended ACECs at the bottom would still allow complete recovery of the resource. The additional acreage above the rim in the East Fork Parachute Creek and Trapper/ Northwest ACECs is necessary to reach the crests of the ridge-tops. This is vital to preventing damage from erosion in order to protect high value watershed processes for fish and plants.

In order to facilitate the orderly recovery of natural gas beneath the top of the Roan, we propose that the BLM delineate a corridor for oil and gas development outside of critical Colorado River cutthroat trout watersheds along the major ridge-top roads: Anvil Points Road, Long Ridge Road, Short Ridge Road, Cook Ridge Road, and Corral Gulch Road. This corridor would be defined by the line following the ridge-top roads and marking the boundary between slopes less than and greater than 20%, and it would be limited to such areas within 600 feet on either side of the road's centerline to remain outside of important watersheds. Consistent with the Department's original proposal, this corridor would allow oil and gas resources to be developed while still protecting watershed values and wildlife habitat. Our analysis has shown that the vast majority of the mineral resource beneath the top of the Roan can be developed by utilizing only the major arterial roadways atop the Plateau. According to industry representatives, operators are able to use directional drilling to reach resources up to 3,000 feet away from drill pads on top of the Roan. Therefore, drill pads atop the Plateau should be spaced no closer than one mile apart. We have determined that limiting development to these major roads on one-mile surface spacing would still allow for the extraction of 82% of the natural gas utilizing existing directional drilling technologies. With further improvements to such technologies, we anticipate that substantially all of the recoverable natural gas could be extracted. An NSO prescription for these ACECs would thus not preclude the active management necessary to protect or enhance their biological and ecological values.[3]

We believe that the measures described above are necessary to protect, preserve, and enhance the biological and ecological values and wildlife and recreational resources of the Roan Plateau in perpetuity. Based upon our discussions with oil and gas industry representatives, these measures would not impede the recovery of the energy resources beneath the Roan Plateau. I take seriously my responsibility to protect the important fish and wildlife resources and ecological values on the Roan Plateau, and I have no alternative but to protest the BLM's decision to offer the Roan Plateau for lease without enlargement of the areas protected by ACEC designation as outlined above.[4]

II. The BLM Should Lease the Top of the Roan Plateau in Phases

Although the BLM's Record of Decision is unclear on this subject, BLM intends to offer the entire top of the Roan Plateau – covering over 34,000 acres of federal lands – in a single lease sale on August 14. Such a leasing strategy would be contrary to the public interest. According to the Department's economic review, this would decrease the State's share of the bonus payments by the equivalent of $200 million dollars in present value using conservative assumptions, and it would be the financial equivalent of giving away more than half of the bonus payments for the top of the Roan. It would also compress these benefits into one near-term payment that would do little or nothing for future generations, and it would limit the BLM's ability to require lessees to incorporate technological advances and adapt to the lessons learned as development proceeds. We believe the BLM's Plan and ROD for the Roan Plateau are deficient in their failure to consider the relative economic return to the federal and state treasuries and environmental protection from its proposed leasing approach versus a phased leasing program. Accordingly, we protest the BLM's leasing of the entire top of the Roan Plateau at once and request that the BLM instead adopt a phased leasing program. We believe that this would result in substantially greater return to state and federal coffers, more sustainable benefits to communities, and fewer environmental impacts.

---

[3] Some people have suggested the NSO limitation be expanded to encompass the entire top of the Roan Plateau and have claimed that up to 56% of the resources underlying the federal acreage in the Roan Plateau Planning Area could be retrieved by directional drilling from offsetting private lands. It is important to note, however, that this figure applies to the entire planning area, both below the rim and atop the Plateau. Moreover, assuming that the legal, technical, and practical issues of drilling from private lands along the edge of the federal acreage on top of the plateau could be resolved, and further assuming that one could drill a perfect pattern along that acreage boundary, we estimate that the maximum percentage of the 34,758 acres of federal lands on top of the Roan that could be accessed using current state-of-the-art directional drilling technology is likely much closer to 20%. Moreover, such an approach does not consider that adjacent private lands allow access only by those companies that control such lands, does not provide a realistic mechanism to achieve a fair bonus payment, and does not limit the environmental impacts associated with drilling from the adjacent private lands. Therefore, it does not meet the State's objectives of protecting the environment or maximizing the economic return to the State.

[4] Alternatively, the BLM could clarify the Plan to demonstrate to the Department's satisfaction that the expanded ACEC areas will receive protection equivalent to that recommended above. For example, the BLM could clarify the Plan to require Department approval for any surface-disturbing activities in the extended ACEC area. Such a measure would be consistent with the State's involvement in the Roan Plan as a Cooperating Agency, and it could include site inspections that would allow the Department to review and analyze attributes of particular proposed sites.

A. Analysis of BLM's Plan for Leasing

The BLM intends to offer for lease at one time all 34,000 acres of federal lands on top of the Plateau. The BLM would require all those holding leases for, or accessed from, the top of the Plateau to join a federal unitization agreement approved by the BLM, which would identify one operator to conduct development activities on all of the leases covered by the agreement and allocate the costs and benefits of gas production to all of the lessees. *See* Lease Sale Notice at 98, Exhibit GS-CSU-ROAN-13. As set out below, offering all of the federal lands atop the Roan in a single lease sale would greatly decrease the amount of the bonus payments and would be contrary to the public interest.

1. BLM's Approach Would Substantially Decrease the State's Return

If the BLM offers for lease at one time all of the federal lands atop the Roan, this would include substantial acreage that could not be developed for many decades. The BLM Plan estimates that 210 wells will be drilled on the first ridge during the 20-year life of the Plan. *See* RMPA/FEIS at 4-8. At 10-acre downhole spacing, this pace of development would drain an area smaller than four square miles during the life of the Plan and recover only about 5.8% of the total gas reserves beneath the Upper Plateau.[5] At this rate, recovery of all of the gas beneath a given ridge would easily require 30 years or more. A stipulation applicable to leases atop the Roan provides that development activities will be allowed on only one of six ridges at a time, and that five-year interim reclamation standards must be met on 90% or more of disturbed lands within any developed ridge before development may move to another ridge. *See* Lease Sale Notice at 98, Exhibit GS-CSU-ROAN-13. Thus recovery of all of the gas beneath the top of the Roan would require up to 140 years. Using the BLM's projections for the pace of development, approximately 75% of the top of the Roan Plateau would not be developed for at least 30 years, and approximately 60% of the top would not be developed for 60 years or more.[6]

Basic economics indicates that oil and gas companies will pay very little today for resources that they cannot develop for many decades because their money today is worth more to them than the income that they will receive in the distant future. As a practical matter, a company is likely to pay little or no bonus today for ridges three, four, five, and six, because they could not be drilled under the BLM Plan for forty, sixty, eighty, and one hundred years, respectively. Under any realistic discount rate, the gas to be produced at such a distant date would have little or no present value. A company would also heavily discount its bonus today for the second ridge because it could not be drilled for at least 20 years, and a discount rate of 10% would reduce the value of the gas to be produced at that time by approximately 86%. For those companies that apply a discount rate of 20%, the value of gas to be produced 20 years in the future would be reduced by approximately 98%. Thus, the bonus payments for leasing all six ridges today are unlikely to be materially greater than the bonus payments for leasing two ridges today, and the bonus payments for leasing two ridges today are unlikely to be significantly greater than that bonus payments for leasing one ridge today. In other words, leasing the entire

---

[5] 210 wells / 64 wells to drain a section = 3.28 sections (square miles) drained. 210 wells x 1.17 BCF per well = 245.7 BCF recovered in 20 years. 245.7 BCF / 4.2 TCF = 5.8%.

[6] Even with a more aggressive drilling plan that completes drilling on a ridge in 20 years, the result would be virtually the same. Development of the second ridge would not begin until year 21, development of the third ridge would not begin until year 41, the fourth ridge would not be developed until year 61, the fifth ridge would not be developed until year 81, and the sixth ridge would not be developed until year 101.

top of the Roan Plateau today would be the equivalent of giving away the bonus rights for approximately 60 to 80 percent of the gas resource.[7]

This conclusion is supported by the Department's economic analysis. We found that because the first dollar of revenue for Ridge Two would not occur for 21 years, the value of that revenue would be substantially discounted. Specifically, we found that a dollar in year 21 was worth only $0.14 in today's dollars for companies utilizing a 10% discount rate -- a conservative assumption, as some companies apparently apply discount rates up to 20%. This would result in companies offering smaller and smaller bonus payments for the second and subsequent ridges. Thus we have determined that because of the discount rate applied by oil and gas operators to future income, and because companies could keep their lease bonus money and use it for development, leasing the Roan in phases (one ridge at a time) would increase the amount of the State's share of the bonus payments by more than 100 percent. We further determined that even if conservative assumptions regarding bonus amounts are used, phased leasing would increase the amount of the State's share of the bonus payments by up to $200 million or more. If more aggressive assumptions are used, then the State's share of the bonus payments will increase proportionately.[8]

Moreover, bonus bids are likely to increase substantially in the future for two reasons. First, the value of natural gas is likely to appreciate in the coming years at a rate significantly greater than inflation, which would result in greater income to operators producing natural gas from the Roan and correspondingly higher future bonus bids. Companies use various benchmarks to estimate the future price of natural gas. The traditional benchmark for current prices, the Henry Hub along the Gulf Coast, indicates that prices have increased 319 percent in the last decade, from $2.14 per million cubic feet (MCF) in 1998 to an average of $7.17 per MCF in 2007. In projecting revenues five years out into the future, the gas industry normally relies on futures contracts reflected in the New York Mercantile Exchange (NYMEX) Strip. The NYMEX Strip at the Henry Hub indicates an increasing price through 2009 and a decreasing price from 2010 to 2012. The U.S. Department of Energy, Energy Information Administration (EIA) predicts the Henry Hub natural gas spot price to average $11.86 in 2008. The EIA also makes natural gas price projections beyond 2012, and EIA data indicate that natural gas prices will continue to increase to about $16 per MCF by the year 2030 because increases in U.S.

---

[7] Industry representatives have claimed that leasing the Roan will result in a $1.2 billion windfall to the State of Colorado in the first year of leasing. *See* "An Economic Analysis of the Windfall that Colorado and the U.S. Stand to Gain," Americans for American Energy, *available at* http://www.americansforamericanenergy.org/Portals/AAE/Roan_Economic_Analysis_Oct2007.pdf. This argument, however, ignores the discount rate that companies will apply to distant revenues. Moreover, this figure uniformly applies a $46,000 per acre amount to the entire planning area to predict bonus payments. Such an assumption is unrealistic, and the resulting $1.2 billion figure is substantially inflated. By way of contrast, the BLM recently estimated that bonus payments would be between $100 million to $300 million. *See* Phillip Yates, "Roan leasing faces challenges," Glenwood Springs Post-Independent, June 30, 2008, *available at* http://www.postindependent.com/article/2008400311384. This dramatic difference underscores the State's concern about the lower bonus bids that will result without phased leasing.

[8] While it may be argued that the State would lose out on a large, one-time cash infusion if the BLM were to offer the entire top of the Roan in one lease sale, the benefits of phased leasing outweigh this. Because the State's discount rate is 4.9% as compared to industry's conservatively estimated 10% discount rate, the State would discount its share of bonus bids received on later phases far less than the industry would discount its bids on those same areas were the BLM to offer them today. Moreover, because companies would develop leased acreage on a much shorter time horizon under a phased approach, it is likely that they would apply an even lower discount rate to their bonus payments for a phased area, resulting in further increased bonuses due to substantially reduced uncertainty.

natural gas demand have outstripped domestic production, a trend they expect to continue over the intermediate term.

Second, operators producing natural gas from the Roan currently sell that gas at a discount of approximately 55% due to constraints in regional pipeline infrastructure, and this discount is likely to be eliminated during the first phase of leasing. In 2007, Colorado gas averaged $4.21 per MCF, compared to $6.83 per MCF for the Henry Hub, resulting in a price differential of $2.39 per MCF. While the new Rockies Express pipeline from Wyoming to Ohio will provide new pipeline capacity for the region, its 1.5 BCFD capacity has already been 80% committed. And though it is believed that this capacity will reduce the Northwest Colorado gas price differential, it will not eliminate it. In November 2007 -- the most current data available for published gas prices -- the price differential between Colorado gas and Henry Hub gas had risen to $2.53. As new pipeline capacity comes on line in time for future phases of Roan leasing, operators should receive the higher prevailing national price of natural gas, which should lead to higher bonus bids for the leases.

2. BLM's Approach Would Shorten the Duration of the Economic Benefits of Roan Plateau Leasing

By offering the top of the Roan for lease in phases rather than in a single lease sale, the BLM could more effectively control the pace of the development of the natural gas resource, which would benefit Colorado and its communities. Northwestern Colorado is currently experiencing a boom in natural gas development, and it is also facing the prospects of oil shale leasing and development. The BLM proposes amending management plans to allow up to 17,000 new gas wells to be drilled in this region over the next twenty years.[9] A recent economic study prepared for the Associated Governments of Northwest Colorado found that due to expanding oil and gas drilling, the population in the region will double in the next 30 years.[10]

This drilling boom in Northwestern Colorado is being fueled in part by larger and larger federal lease sales. Between FY2005 and FY2006, the number of federal acres leased in Colorado increased by over 100,000 acres, or about 49%. During the same period, the number of acres under federal lease that were in production actually decreased by 1%. While there were 4,509,374 acres under federal oil and gas lease in Colorado at the end of 2006, there were only 1,366,172 acres in production. Colorado and Western Slope communities have been the beneficiary of this leasing and drilling activity, as the State typically receives half of lease bonuses and royalties under the Mineral Leasing Act. 30 U.S.C. § 191. According to the BLM, in 2007 the state received $123 million in federal mineral payments. Nonetheless, there is a huge inventory of federal leases that have been issued but not yet drilled or put into production.

While the precise amount of the bonus bids the BLM will receive for Roan leases is the subject of much speculation, the timing of them is more certain. The BLM's approach of leasing the entire top of the Plateau in one sale would result in a single infusion of bonus bids. Our analysis shows that this amount will be reduced by as much as $200 million or more in present

---

[9] *See* Reasonable Foreseeable Development Scenario for Oil and Gas Activities in the BLM White River Field Office: Rio Blanco, Moffat, and Garfield Counties, Colorado, Executive Summary at 3, *available at* http://www.blm.gov/rmp/co/whiteriver/documents/RFD_Executuve_Sumnmary.pdf.

[10] *See* "Northwest Colorado Socioeconomic Analysis and Forecasts," *supra* note 1, at IV-15.

value when compared with a phased leasing approach. In addition to delivering less money for the valuable federal natural gas resources beneath the Roan, however, the BLM's approach will effectively deprive Colorado and its local communities of the long-term benefit of multiple lease sales spread out over the coming decades.

In a phased leasing program, Colorado could look forward to recurring lease sales of the Roan's minerals, resulting in periodic infusions of its share of the federal bonuses. Rather than a one-time influx of bonus payments devalued by companies' discount rates, phased leasing would result in sustained income to the State for decades. This would be preferable, from the State's standpoint, in order to extend the duration of the economic benefits of Roan leasing.

3. BLM's Approach Would Result in Less Environmental Protection

Oil and gas activities on the Roan Plateau must utilize state-of-the-art technology for the protection of the environment, which is an evolving concept. Leasing the entire top of the Roan now could limit BLM's ability use lease stipulations to require companies to utilize the latest innovations. Although BLM has stated that it can control federal lessees' surface-disturbing activities through permit conditions, both the right to develop and the standards for operation attach at the time the lease is issued. Federal lessees thus gain legal rights that make attaching subsequent operational conditions more difficult after lease issuance. We are concerned that by issuing leases now on lands that will not be developed for several decades, BLM will constrain its ability to capitalize on future technology developed for the protection of the environment.

In recent years, the Colorado oil and gas industry has made great strides in reducing the impacts of drilling. For example, directional drilling allows multiple wells to be drilled from a single location, allowing a much larger area to be drained from a smaller surface footprint. Our discussions with industry indicate that lessees should be able to reach deposits up to 3,000' away from drill pads on the top of the Roan Plateau. This would allow pads on top of the Roan to be spaced at least a mile apart and still allow extraction of all of the recoverable resource. We expect the reach of directional drilling to increase even further in coming years, with corresponding environmental benefits, and we expect these technological advances to be applied to the Roan. Water and waste management are the subject of similar innovations that have benefited the environment and continue to evolve.

It is vital that innovative measures like these be used for recovery of the natural gas beneath the Roan Plateau. Because the terms under which federal lessees may conduct drilling and production operations are set at the time of lease issuance, attaching subsequent operational conditions to take advantage of evolving technology after lease issuance will be difficult. In our review of the stipulations contained in the Lease Sale Notice, we cannot identify a stipulation that would allow the BLM to continually modify requirements to take advantage of changes in technology. Because of the environmental and ecological values on the Roan, the very latest state-of-the-art technologies and practices should not be left to industry's voluntary use or the BLM's discretion when approving exploration plans or drilling permits. Rather, they should be required as lease stipulations, and this is best accomplished through phased leasing. Doing so would also provide operators with a clear picture at the leasing stage of what will be required in order to recover the resource, eliminating the uncertainty that results from attaching conditions later at the drilling stage.

B. Colorado Solution: Lease the Top of the Roan Plateau in Phases

To avoid these pitfalls, the BLM should implement a phased leasing program for the top of the Roan Plateau. The BLM's plan for the Roan divides the top of the Plateau into six development areas roughly corresponding to its ridgetops, and these administrative divisions should be leased sequentially.[11] Under this approach, a ridge would be leased, explored and drilled – with at least 90% of the wells necessary to drain the recoverable resource completed – before the next ridge is leased. As under the ROD, lessees of the first phase would be required to join a federal unit approved by the BLM, which would identify the operator to conduct development of the leases and allocate costs and revenues from the ridge among the lessees.[12] While the ROD provides a minimum distance between pads of 2,640 feet, we think pads can and should be located a minimum of one mile apart. Moreover, while the BLM would authorize exploratory wells outside of the area being developed, such a provision does not belong in a phased leasing program. Rather, exploration should be restricted and tightly controlled in the next-scheduled phase. In this way, phased leasing would allow federal and state governments to better control the pace of development, ensuring that development of the Roan proceeds in a rational way and at an acceptable pace in furtherance of a long-term natural gas industry in northwest Colorado.

By limiting the amount of land that could be occupied at any one time across the top of the Roan Plateau to 350 acres, the BLM's Plan was intended to encourage practices such as consolidation of facilities, avoidance of waste pits, and rapid interim reclamation of drilling sites to keep acreage in the bank. We think these measures are necessary to successfully implement a phased leasing plan as well, and the BLM should set objective limits on unreclaimed disturbance in each phased unit that provide the same level of protection.[13]

There will be arguments concerning the financial implications of a phased approach versus total leasing, but this is not a simple analysis. For example, while phased leasing increases certainty by offering lands nearer in time to when they may be developed (which should result in higher bonus payments), it may conversely create additional obstacles regarding information needs for subsequent phases. It may also be argued that industry might reduce its bonus bids due to perceived logistical costs associated with phased leasing versus the BLM Plan. Not only is it impossible to quantify any such potential reduction, but we think it even more

---

11 The Department would work with the BLM to develop a phased leasing plan that would identify the order in which areas would be leased. For example, it appears logical to begin leasing above the rim in either the northwest area (Corral Ridge unit) or in the southern area (Anvil Ridge unit), depending on the ability to access the resources. The Department's goal would be to select an area that would minimize the extent of disturbance elsewhere on the Plateau.

12 An alternative approach would be to amend the Mineral Leasing Act to remove the current 2,560 acre lease-size limitation and allow the BLM to offer all acreage within a phased lease area atop the Roan as a single lease. *See* 30 U.S.C. § 226(b)(1)(A) (limiting leases to 2,560 acres).

13 Given what we know about pad size and directional drilling, we can estimate the surface disturbance necessary to fully develop the resources in an area. For example, the Anvil Ridge development area is 8,477 acres. Draining this area at 10-acre downhole spacing would require 847 wells. Using the industry's current standard of twenty wells per pad, this would require 42 pads and, at 7 acres apiece, this would require 296 acres of disturbance. Note that this does not assume, for the moment, further advances in directional drilling technology that would allow more wells per pad or smaller pads. Nonetheless, when one subtracts the one acre per pad that does not get counted toward the BLM's surface-disturbance limit and the current road network, this would come to about 254 acres of maximum surface disturbance to develop the Anvil Ridge area, not accounting for interim reclamation.

likely that companies would reduce their bids in response to complications associated with the BLM Plan, such as participation in an undivided federal unit encompassing over 34,000 acres and involving up to 18 different lessees, as contemplated in the Lease Sale Notice.

III. The BLM Should Not Lease the Roan Until Transfer Act Amendment Is Passed

Under current law, the State will not receive its ordinary share of bonus bids or federal royalties from leasing or development of the federal minerals beneath the Roan Plateau. When Congress transferred jurisdiction over the Roan Plateau from the Department of Energy (DOE) to the Department of Interior (DOI) in 1997, it exempted funds collected from the leasing and development of the area from the provisions of the Mineral Leasing Act that provide for equal sharing between state and federal governments of royalties, bonus payments, and other lease income. *See* 10 U.S.C. § 7439(f) (hereinafter "Transfer Act").

The Transfer Act exemption was intended to allow the U.S. government to amass the funds necessary to remediate the DOE Anvil Points oil shale site and to reimburse the government for money it originally expended to install wells, gathering lines, and related equipment on the transferred lands. It provides that no money collected for leasing or development of the Roan is to be disbursed to the State until the DOE and DOI Secretaries jointly certify to Congress that the fund "is equal to the total of the following:

> "(A) The cost of all environmental restoration, waste management, and environmental compliance activities incurred by the United States with respect to [the Roan Plateau lands].
>
> "(B) The cost to the United States to originally install wells, gathering lines, and related equipment on [the Roan Plateau lands] and any other cost incurred by the United States with respect to the lands."

Id. at § 7439(f)(2)(A)-(B).

The cleanup of the Anvil Points oil shale site has not yet begun, and the costs of originally installing equipment in the planning area "and any other cost. . . with respect to the lands" are unknown. However, according to media accounts the federal government has collected sufficient funds to cover the necessary cleanup of Anvil Points and the cost to reimburse the federal government for oil and gas infrastructure. According to a recent report, the Roan Plateau fund currently has about $96 million and accumulates $1-2 million each month.[14] About $30 million is estimated to be necessary for the cleanup and another $39 million is needed to reimburse the DOE for infrastructure the agency installed on the site. *Id.*

In his letter to the Governor dated March 13, 2008, Assistant Secretary C. Stephen Allred stated that the BLM has obtained concurrence on a waste management site design and location from the Colorado Department of Public Health and Environment, and that the agency had begun the procurement process that will award a contract for the cleanup. Although Assistant Secretary Allred stated in his letter that the BLM planned to award that contract by June 1, 2008, that has

---

[14] *See* Phillip Yates, "Roan leasing faces challenges," *supra* note 7.

apparently not yet taken place. Once funds have been obligated, Assistant Secretary Allred stated, the agencies "can begin work toward certification."

In addition, there are provisions moving through the U.S. Congress that would remove the Transfer Act prohibition on the State receiving its share of bonus bids and royalties from Roan Plateau leasing and development.[15] For example, legislation co-sponsored by Senators Allard and Salazar would split the amounts already in the fund equally between the federal government and four Northwestern Colorado counties, and it would provide that future revenues -- bonuses, royalties, and rents -- would be shared with the State under the Mineral Leasing Act. *See* S.2857 (110th Congress). The same bill has been introduced in the U.S. House of Representatives by Representative Salazar. *See* H.R. 5807 (110th Congress).

Colorado must have an assurance that it will receive its share of bonus payments associated with leasing of the Roan Plateau before such leasing occurs. We are extremely concerned that, due to the Transfer Act prohibition and the delay in conducting the required cleanup of the Anvil Points oil shale site, the State will not receive its share of Roan bonus amounts. This would be an unconscionable result.

Because the State will not receive its share of lease bonuses under current law, we request that the BLM refrain from offering for lease parcels within the Roan Plateau Planning Area until the Transfer Act is amended. Again, bipartisan legislation has been introduced in the Congress and we trust that it will move expeditiously. Once it is passed and signed, the State could support a leasing program for the Roan that is consistent with the other provisions in this protest. But until the federal law is changed, the State has no choice but to protest the leasing of the Roan.

IV. Conclusion

We believe that the vast natural gas resources beneath the Roan should be developed in a responsible, environmentally protective, and economically beneficial manner. The measures described above to enlarge the ACECs will result in the increased protections that are necessary to ensure enduring wildlife and environmental values found on the top of the Roan Plateau, and to protect valuable big game winter range below the rim, particularly for mule deer. The measures setting out a phased leasing program are vital to ensure that more than half of the bonus value is not inadvertently given away. They also help to extend the duration of the resulting economic benefits, and allow the BLM to require operators to use the most advanced technology available. This will allow the recovery of more gas, at less cost, and with less impact on the environment.

We believe that these measures are allowed under the BLM's existing plan for the Roan and represent refinements necessary to protect the interests of the State of Colorado and its citizens. Should the BLM determine that adoption of these measures would require amendment

[15] The State could likely work with Colorado's congressional delegation to incorporate into any amendments to the Transfer Act those changes to the Mineral Leasing Act necessitated by the refinements proposed above. For example, legislation could allow individual leases larger than 2,560 acres so that the BLM could offer each of the six administrative areas atop the Roan as a single lease, or it could allow the BLM to set minimum bids higher than $2.00 per acre to ensure that lease bids accurately reflect the value of the resources beneath the Roan.

of the Plan or Records of Decision, then we pledge our active support to complete these amendments. While we recognize that the Roan has already been the subject of an intense and lengthy planning process, it is vital that the management plan for this area get it right, and limited amendment of the Plan is a small price to pay given the exceptional natural resources and ecological values found there. Should the BLM decline to implement our recommendations through clarification or amendment to the Plan, then the State has no choice but to oppose leasing of the Roan Plateau at this time. Without such a clarification or amendment, leasing under the BLM Plan would jeopardize valuable ecological and environmental values and decrease by more than 50% the State's share of bonus payments for the natural gas resources.

Again, we have appreciated the opportunity to work with the BLM on the Roan Plateau Plan as a Cooperating Agency and to submit supplemental comments last December. We look forward to working with the BLM on the Roan in the months and years to come. Please do not hesitate to contact me if you would like to discuss this matter.

Sincerely,

Harris D. Sherman
Executive Director

cc: U.S. Senator Wayne Allard
U.S. Senator Ken Salazar
U.S. Representative Diana DeGette
U.S. Representative Doug Lamborn
U.S. Representative Marilyn Musgrave
U.S. Representative Ed Perlmutter
U.S. Representative John Salazar
U.S. Representative Tom Tancredo
U.S. Representative Mark Udall