State of Utah

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Office of the Governor
PUBLIC LANDS POLICY COORDINATION

JOHN HARJA
Director

April 28, 2008

Brad Higdon
Planning and Environmental Coordinator
Bureau of Land Management
Price Field Office
125 South 600 West
Price, Utah 84526

SUBJECT: West Tavaputs Plateau Natural Gas Field Development Plan
Draft Environmental Impact Statement (DEIS)
Project No. 08-8885

Dear Mr. Higdon:

The State of Utah appreciates the opportunity to work with the Bureau of Land Management (BLM) as a formal cooperating agency in the preparation of this Draft Environmental Impact Statement (DEIS) for the proposed West Tavaputs Plateau Natural Gas Field Development in Carbon and Duchesne Counties. The state also appreciates the BLM's extension of similar status to local governmental entities that have a stake in the planning area under consideration. The state firmly believes that cooperative discussions among the various landowners and regulatory agencies will lead to the best possible final product.

The state, local governments, and BLM have invested considerable time and effort working together in this impact analysis. The state's expectation is that this process will continue and lead to a well-reasoned and well-formulated full field development. Further, while the state considered local governments' input during preparation of its comments, the BLM should also fully consider the comments submitted directly by local governments.

The attached comments and concerns are offered in the spirit of cooperation through disclosure, analysis and adherence to the provisions of law, regulation, good governance and common sense. The state recognizes impact analyses as a dynamic process that will continue into the future, and reserves the right to supplement these comments as necessary. The state looks forward to resolution of these issues as a cooperating agency through the preparation of the Final EIS.

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Utah Code section 63-38d-401, *et seq.*, provides standards for state policies, plans, programs, and processes related to use, development and protection for federal lands and resources on federal lands in the State of Utah. It is the policy of the state that this legislation reflects criteria which must be considered during federal planning processes for federal lands. The State of Utah looks forward to working with the BLM to harmonize state, local, and BLM plans towards our shared stewardship responsibilities.

The State of Utah also recognizes the high density of spectacular rock art, archaeological sites, historical sites, and other cultural resources in Nine Mile Canyon and the West Tavaputs project area. We appreciate that the Bureau of Land Management has already been working with our State Historic Preservation Office under Section 106 of the National Historic Preservation Act. We support their comments and encourage the BLM to continue to work with the State Historic Preservation Office to consider potential effects and develop proactive solutions to the challenging resource issues in this project area. Careful analysis of cumulative and indirect impacts from any proposed drilling in the canyon bottoms, from dust due to traffic in the canyon itself, and indirect effects resulting from potential increased site visitation will require detailed analysis in the final EIS. The State Historic Preservation Office looks forward to working with BLM in completing this analysis.

The state, through the Public Lands Policy Coordination Office (PLPCO), contracted with the Bureau of Economic and Business Research at the University of Utah which completed an economic impact study of the oil and gas exploration and production industry in the Uinta Basin titled *The Structure and Economic Impact of Utah's Oil and Gas Exploration and Production Industry: Phase I - the Uinta Basin*. This study was followed by the *Phase II – Carbon and Emery Counties* study. The full Phase I study is attached for your consideration as Attachment B, and the Phase II study is attached for your reference as Attachment C.

In 2006, the Utah Legislature adopted an energy policy requiring streamlined permitting to expedite issuance of permits for energy-related projects. Utah has a process to perform this function through its Department of Environmental Quality. The Price BLM Office should commit to utilizing this established process in the review of such applications.

Additional State of Utah comments and concerns are attached for you review. Please direct any other written questions regarding this correspondence to myself or call Jonathan G. Jemming at (801) 537-9023.

Sincerely,

John Harja
Director

Attachment A
State Comments and Concerns

Indirect Impacts Analysis

Significant impacts relate to the indirect effects of the project on the natural resources of the State of Utah. Yet, Chapter 4 is lacks reference to, or analysis of, certain elements of the project's indirect impacts on the environment. Please review Chapter 4 and provide analysis of the indirect impacts of the project in all appropriate contexts.

Air Quality

Upon review of the subject DEIS, the following specific comments relating to modeling are submitted:

Chapter 3, Table 3.3-3

Background for PM2.5 was not provided by the UDAQ, but there is a value listed for it in the DEIS. The UDAQ does not currently require PM2.5 modeling for new sources, and therefore has not developed background PM2.5 values for studies such as this EIS. The EPA has not finalized its guidance on modeling new sources for compliance with the new PM 2.5 NAAQS. Methods for modeling secondary particle formation as well as treatment of background need to be developed before there are any regulatory requirements. There should be some discussion regarding the current guidance on PM 2.5 modeling.

Chapter 3, Table 3.3-3

The background PM10 data has recently been revised to include recent PM measurements in the Vernal area. Please correct the background for PM10 to the following:

24-hour PM10:	63.3 micrograms/cubic meter
Annual PM10:	10.4 micrograms/cubic meter

Appendix J, AERMOD Modeling report, Section 5.1

The UDAQ models unpaved haul road impacts up to the edge of the road's right-of-way. In the DEIS, the modeling used a buffer zone of 100 meters between the roads and model receptors. This would tend to under-estimate impacts from the road. Unless the area is fenced off and considered private property, the area must be treated as ambient air. The NAAQS was developed to protect wildlife and vegetation, in addition to human health. Modeling should be performed to assess the maximum impact on the NAAQS, which would mean placing receptors along right-of-ways, and in all areas that are considered ambient air.

Appendix J, AERMOD Modeling report, Section 5.1

The DEIS used flat terrain in the model. The study area is not flat and should therefore be modeled using actual terrain elevations. Impacts from compressors or any other point source is expected to occur in terrain elevations that are higher than the stack base. This EIS does not address any of these complex terrain impacts. DEM data is readily available, free of charge, and should be used in the final modeling analysis.

Appendix J, AERMOD Modeling report, Figure 5.1

The figure depicts the cumulative source model layout. The alignment of the roads is nearly perpendicular to the prevailing winds, which would lead to maximum impacts from a cross wind. Worst case impacts usually occur with winds nearly parallel to the road, which would occur on an in-frequent basis as the model is currently setup. A better approach would be to use an actual layout of well pads and roads, with more well pads and roads included. Only 3 well pads are modeled in the cumulative analysis. More well pads should be included if a hypothetical (generic) model setup is to be used. Also, worst case meteorology should be used instead of data that is some distance from the area, and may not be representative of the modeling study area.

Appendix J, AERMOD Modeling report, Section 5.1

The DEIS used flat terrain in the model. The study area is not flat and should therefore be modeled using actual terrain elevations. Impacts from compressors or any other point source is expected to occur in terrain elevations that are higher than the stack base. This EIS does not address any of these complex terrain impacts. DEM data is readily available, free of charge, and should therefore be used in the final modeling analysis.

Appendix J, Calpuff Modeling Report, Table 3-1

The bias settings that are listed in this table are non-default values. The UDAQ recommends that the default bias of 0 for all cell heights be used.

Appendix J, Calpuff Modeling Report, Section 5.2.1

The project impacts, when total cumulative visibility extinction exceeds 10% reduction, needs to be determined. FLAG recommends that the project's contribution to the extinction in these cases be less than 0.4%. There should be an estimate of the proposed alternative's contribution to the total, so that this can be determined.

Appendix J, Calpuff Modeling Report, Calpuff input file

Ammonia – Recommend the use of seasonal or monthly values if data can be found to support this. The default of 10 ppb is much higher than the value of 1 ppb as used in the DEIS, and therefore should be used unless there is data collected in the study area. Since there is no monitored ammonia data in the study region, the default value of 10 ppb should be used.

Division of Oil, Gas and Mining

Due to the nature of the topography of the West Tavaputs Plateau, the multiple and single well pads being proposed for development of this vital resource is the most efficient way to achieve the maximum recovery of oil and gas in this area. We are also aware of the rapidly changing technology that makes multiple well-bores from the same location possible, and would encourage Bill Barrett Corporation to continually review how this technology can make it possible to reduce the number of overall wellsites as the field is developed.

In the Proposed Plan on page 2-25 under the subheading "Water Management," the statement is made that:

> "Depending on the alternative selected, one to three water management facilities would be constructed. Produced water not reused or transported to commercial disposal sites outside the WTP Project Area would be managed at these sites. Water to be used for drilling and completion and water recycled from drilling and completion operations would also be managed at these facilities. Each water management facility would be approximately 5 acres in size. The facilities would typically include one or more lined storage ponds, which would be constructed in accordance with applicable regulations. Other equipment at the water management facilities would include truck loading and unloading facilities, oil separation and water treatment equipment, tanks, and pumps. A spray system may be constructed over the ponds to enhance evaporation. If a spray system is used, BBC personnel would monitor the system to make sure overspray would not leave the water management facility."

It has been the experience of the Division that evaporation pits in this environment have limited effectiveness even with enhanced spray to increase surface area for evaporation for the following reasons:

1. Limited evaporation takes place at the altitudes consistent with the WTP area. Pits constructed in the Emma Park area just west of WTP provided an example.

2. The extremes of temperature at this altitude were responsible for pit liner failures that caused leaks in nearly every pit constructed in the Emma Park area.

3. Wind velocities caused overspray that was a continuing problem during the life of these pits, and was difficult to control.

4. The windy conditions did not substantially aid evaporation even during the two months when it was expected that the evaporative rate would have been highest.

The Division prefers underground injection of salt water, if possible. A combination of disposal methods is usually necessary. We recommend an aggressive recycling and reuse program be used and that the use of surface pits be minimized. It is noted that an aggressive plan to recycle water from drilling and production activities can also have a significant impact on the amount of traffic accessing this area.

School and Institutional Trust Lands Administration (TLA)

TLA is an independent state agency responsible by law for management of lands granted by Congress to the State of Utah pursuant to the Utah Enabling Act, Act of July 17, 1894, 28 Stat. 109, for the financial support of Utah's public schools and other state institutions. The United States Supreme Court has referred to this Enabling Act land grant as a "solemn compact" between the United States and the State of Utah that obligates the United States to take into consideration the purposes of the grant when managing federal lands.

The State of Utah is obligated by both the Utah Enabling Act and the Utah Constitution to act as a trustee in managing school trust lands. Among the fiduciary duties imposed by this trust on TLA is the duty to manage trust lands in the most prudent and profitable manner possible, and not for any purpose inconsistent with the best interest of the trust beneficiaries. Revenues from school trust lands are deposited in the Permanent School Fund, a permanent endowment for public education. Interest and dividends from the Permanent School Fund are distributed to individual public schools statewide annually to supplement critical academic needs.

TLA manages an estimated 10,411 surface acres and 11,550 mineral acres of state trust lands within the EIS area, representing approximately 8% of all lands in the EIS. Most of these state trust lands are comprised of numbered sections 2, 16, 32 and 36 in each township, representing the grant of in-place school sections made by the Utah Enabling Act. The significance of the "checkerboard" pattern of land ownership is that, because most trust lands are surrounded by BLM lands, planning decisions made by BLM in the EIS area impact the state trust lands making them an "island" within the surrounding BLM lands. BLM's decisions on how to develop its lands directly affect the ability of the State of Utah to manage state trust lands for the purposes for which they were granted by Congress, which was to provide revenue for public schools and other beneficiary institutions. This is an issue of significant impact to Utah's school trust.

BLM has an obligation to include in its analysis a discussion of the impact of federal land actions on inheld state trust lands within the EIS area.

Volume I, 1.5.1 Conformance with the Price River MFP

On page 1-7, the EIS should include a statement acknowledging access to all TLA parcels among the bullet points for planning criteria.

Volume I, 2.1.1.3 Pipeline Construction and Associated Tasks and Facilities

Wherever possible, TLA would prefer pipelines not to be buried, particularly if it requires blasting of rock or other extremely disruptive surface disturbance. The BLM should weigh the alternatives of buried vs. surface pipelines where permanent damage could result by attempting to bury lines. TLA, on its lands, prefers the least amount of surface damage possible but will be forced to follow the BLM's decision in many instances since a line cannot be buried for most of its route then surface for a single non-contiguous section or two here and there. TLA would work cooperatively with the BLM and BBC to discuss where the possibility of surface pipelines might exist and where it will be necessary to bury the lines in areas where the lines cross TLA land.

Volume I, 2.1.5.3 Produced Water Management

TLA suggests the highest priority be given to disposing of water in the subsurface. TLA has many ponds on its lands throughout the Basin but acknowledges that evaporation ponds are not the most effective way to handle produced water. The BLM should encourage BBC to otherwise dispose of its produced water by injection rather than through evaporation ponds and act proactively in approving water disposal applications.

Volume I, 3.5.1.4 Surface Water Rights and Use

In reviewing TLA's records, it also owns the following surface diversion water rights which are not listed in your table 3.5-9:

Surface Diversion Water Rights - Nine Mile Canyon Area

Township	Range	Section	No.	Location	
11 S	15 E	31	90-1096	Nine Mile Creek	
11 S	17 E	32	90-1475	Nine Mile Creek	
11 S	17 E	32	90-1476	Nine Mile Creek	
11 S	18 E	32	90-1478	Nine Mile Creek	
12 S	15 E	2	90-1422	Blind Canyon Creek	
12 S	15 E	21	90-1237	Prickly Pear Canyon Creek	Not on Trust Land

12 S	15 E	32	90-1424	Tributary to Dry Creek
12 S	15 E	32	90-1425	Dry Creek
12 S	15 E	36	90-1426	Cottonwood Creek
12 S	15 E	36	90-1486	Devil's (Daddy's) Creek
12 S	16 E	32	90-1429	Cottonwood Creek
12 S	16 E	32	90-1542	Underground Well
13 S	16 E	16	90-629	Jacks Creek
13 S	16 E	16	90-630	Pine Spring Creek
13 S	16 E	36	90-1631	Little Cedar Ridge Canyon Creek

Gating of Roads

TLA would like to work cooperatively with BBC and the BLM to determine which roads that access trust lands might be subject to gating. TLA must be a good steward of the land and not allow unnecessary degradation from new road development that concentrates people on its lands.

The BLM needs to consider: (1) continued motorized administrative access on "non-designated" or gated routes providing access to trust lands will be permitted to TLA, its permittees, grantees and successors-in-interest notwithstanding any closure to the general public; (2) allow TLA, its permittees, grantees and successors-in-interest to undertake reasonable maintenance activities to preserve and improve existing access across BLM lands, after consultation and appropriate environmental review by BLM; and (3) existing routes that are the sole access to state trust lands will not be reclaimed without full BLM consultation with and approval by TLA.

Map 3.6 – Land Use

The map incorrectly shows TLA's mineral position within the EIS area. Please correct map by obtaining a current land status map from TLA's GIS department at 801/538-5100. TLA has 10,411 surface acres and 11,550 mineral acres within the EIS plan.

Lands and Realty

No matter what Alternative is selected, the BLM is reminded that it must provide reasonable access to the trust lands within the EIS area. It should be noted that, pursuant to the decision of the United States District Court for the District of Utah in *Utah v. Andrus*, BLM is obligated to grant reasonable access to the State of Utah and its grantees, assigns and/or

successors-in-interest to school trust lands notwithstanding any special designation or avoidance/exclusion area for rights-of-way on intervening BLM lands. In furtherance of this obligation, no existing roads providing access to trust lands should be closed without the consent of TLA.

Division of Wildlife Resources (UDWR)

The Utah Division of Wildlife Resources appreciates the coordination and degree of effort displayed by the BLM and Bill Barrett Corporation (BBC), who involved UDWR in the planning stages of the West Tavaputs Plateau Draft EIS. We congratulate the BLM on producing a draft EIS with several reasonable alternatives offering substantive differences in approach. Obviously, a lot of hard work and sincere commitment went into producing the NEPA document.

Winter Stipulations and Mitigation

The proposed action and preferred alternatives in this EIS are fitted to BBC's request to waive seasonal closure stipulations and drill through the winter months on approximately 80,000 acres of crucial winter range for big game in the Nine Mile, Range Creek wildlife management unit. UDWR was among the contributors to the design of this approach, and is supportive of the project, as we believe wildlife outcomes could be improved even while expanding the ability to address domestic energy needs. Nonetheless, we are cautious in the implementation phase. The keys to successful implementation of this novel approach will consist of monitoring and corresponding adaptive management. Winter drilling will substantively impact the wildlife using these winter ranges through disturbances including: keeping open (throughout the winter) access to the public, heavy vehicle traffic associated with drilling rigs and fracturing equipment, direct displacement of wildlife, indirect effects such as noise or visual disturbance, other direct impacts such as habitat fragmentation, wildlife isolation, and formation of constricted travel "bottlenecks," etc. As development ensues within crucial habitats, wildlife will be forced to settle for less desirable habitats. This will add stress during a critical season when wildlife populations are exposed to one of their most energy demanding life stages. This stress will likely negatively affect their survival and recruitment, and ultimately diminish wildlife populations if other factors do not compensate for the impact. Those "other factors" would consist in part of compensatory mitigation, and it is with this focus that we support BLM proceeding with the trial.

To date, we are unaware of any other field development which has been allowed to conduct year-long development activities in crucial winter ranges without being required to abide by seasonal closure stipulations. The initial preference of UDWR, in the absence of a constructive alternative such as has been outlined in the WTP document, would be that winter seasonal closure stipulations remain in full force and that wildlife compensatory mitigation be conducted to offset the unavoidable disturbance impacts to wildlife using the West Tavaputs Plateau.

In full-field development, as research has shown, disturbance causes significant impacts despite seasonal closure stipulations. A study looking at energy development impacts in the Pinedale Anticline area states that major shifts in mule deer distribution occurred through the first three years of development even though activities were restricted to non-winter months. Deer abundance estimates within the development area have significantly declined since development began (Sawyer et al. 2005). This will require further study and adaptive management.

For this reason compensatory mitigation is important for wildlife as a needed technique to offset the impacts which could not be avoided or reduced through application of "best management" practices. UDWR supports the plans to conduct 30% of the compensatory mitigation in the first three years of development and then progress with an adaptive management regime. The intent of mitigation projects are to provide wildlife with a landscape with sustainable habitat prior to disturbance.

Important Wildlife Habitats

Sagebrush parklands have a high value in the West Tavaputs Plateau winter habitat. They are the life-blood of the crucial winter ranges for mule deer, elk, and sage-grouse. These wildlife species rely and depend on the sagebrush parklands on the West Tavaputs Plateau. The topography in the project area is full of deep canyons with very limited sagebrush parklands on top of the mesas. These sagebrush ecosystems are extremely delicate and are currently stressed by drought and encroaching pinyon-juniper forests. It is vital that these sagebrush parklands are protected. All efforts should be made to plan effectively so that vital habitats are sustained and protected. It is more important to retain, maintain, enhance, and preserve existing habitat than to attempt to recreate habitat in alternate locations.

Wildlife Species

The proposed energy development on the West Tavaputs Plateau raises four general concerns that will adversely effect wildlife: 1) direct loss of habitat; 2) physiological stress to wildlife; 3) disturbance and displacement of wildlife; and 4) habitat fragmentation and isolation.

Although the amount of direct habitat loss disturbance may be small compared to the total acreage of the entire project area, the avoidance and stress response by wildlife caused by each well pad, road, and facility extend their influence to surrounding habitats. Negative response zones can reach a radius of a quarter mile for mule deer (Freddy et al. 1986) and exceed a half-mile on open winter ranges for elk (Brekke 1998, Hayden-Wing Associates 1990, Hiatt and Baker 1981, John and Lockman 1980) . Though vegetation and other components of natural habitat may remain unaltered, as the densities of wells, roads, and facilities increase, there may be indirect disturbances causing the effective use of adjacent habitats to decrease as wildlife use habitats less than availability would suggest, although there is anecdotal evidence otherwise.

Mule Deer

A recent study (Sawyer, H., R. Nielson, D. Strickland, and L. McDonald. 2005) reported that energy development adversely affects mule deer habitat selection and population performance. The study demonstrated that changes in mule deer habitat selection occurred the first year of development, and rather than acclimate, deer selected habitat farther away from development for the first 3 years. Deer distribution shifted from high use areas to less preferred and less suitable habitats over time. This was correlated with an observed (estimated) 46% reduction in deer populations in the developed area. Extensive natural gas development reduces the size of effective winter ranges and may result in increased deer densities on the remaining winter ranges. The result would be reduced forage, lowered fawn survival/recruitment, and diminished over-winter carrying capacity. A reduction in winter carrying capacity also increases the probability of deer moving onto poorer quality ranges, where adult survival is further decreased.

Elk

The effect on elk of landscape and habitat fragmentation by new roads, well pads, traffic, and other facilities is inadequately addressed in the draft EIS. Particular to the West Tavaputs Plateau project area, fragmentation caused by development will take place in "bottleneck" areas where wildlife migration routes between elk summer and winter ranges exist only on top of mesas. UDWR is concerned that this has the potential to displace and isolate wildlife. The project-specific constriction of travel corridors on the tops of narrow mesas is not adequately addressed in the draft EIS, and needs to be analyzed more closely.

Sage-grouse

Sage-grouse populations have been declining throughout the West. Greater sage-grouse have been designated by the Utah Wildlife Board as a Utah Species of Concern. The *Utah Sensitive Species List* (December 14, 2007) identifies extensive loss of habitat coinciding with declining populations as the reasons the Greater sage-grouse is designated as a Species of Concern. Currently, the Greater sage-grouse is under review by the U.S. Fish and Wildlife Service to determine whether the species is warranted for protection under the Endangered Species Act. UDWR is dedicated to restoring, protecting and managing sage-grouse habitat and populations to preclude the species from becoming a federally listed species. Winter habitat is particularly important for forage and cover through the winter season and is possibly a limiting factor contributing to the decline of the species if disturbance from human activities and development occur. Winter habitat is critical for sage-grouse because it affects the female adult birds, and subsequently, nest success and clutch size (Moynahan et al. 2007). Sage-grouse have been found to avoid energy development in habitat that would normally be suitable and population size and persistence may be inordinately affected by disturbance impacts to wintering habitat (Doherty et al. 2008).

Increased road traffic may be detrimental to sage-grouse. Sagebrush patches in the winter range are relatively small and merely moving a road to adjacent pinyon-juniper may not shift vehicles far enough away from the sage-grouse. This is a particular problem on Prickly Pear Mesa where all re-route alternatives still direct traffic through sage-grouse use areas.

Mexican Spotted Owl

The UDWR informed the Price BLM that a pair of Mexican spotted owls are located in Flat Canyon. We have formally requested, in writing, that a Protected Activity Center be established to protect this breeding-pair adjacent to the project area.

Site-Specific Issues

Sage-grouse winter use areas within the project area are Harmon Canyon (Prickly Pear), and Sagebrush Flat. The areas of Bishop Ridge and Cowboy Bench are also core use areas that exist in close proximity of the project area and should be considered when determining wildlife impacts. These areas are of particular concern to the UDWR, because recent research suggests they should have no surface occupancy due to their importance and use by wintering sage-grouse (Doherty et al. 2008). Note that this impact is distinct from the typical *lek*-associated concerns for nesting and brood rearing.

Prickly Pear

Section 3.10.3.2 should include the airstrip in Harmon Canyon. Also, the road realignment should be re-analyzed to take sage-grouse use of the airstrip into consideration. To avoid impacts, the road will need to be re-routed either farther north to the edge of the mesa or to the south on the narrow pine ridge.

UDWR has concerns over the management of the Prickly Pear area. Sage-grouse that winter on the mesa were initially located in 2005. Since 2005, however, a Questar pipeline has been installed that has bisected one of the highest use areas for the sage-grouse. This negative impact was further exacerbated when BBC bisected the other half of this same area when they installed an interconnect pipeline.

Sage-brush Flat

Sagebrush Flat is also a high use area for wintering sage-grouse. UDWR recommends that access roads be removed from Sagebrush Flat to minimize disturbance. We also recommend that all well pads, or any other infrastructure, not be constructed on Sagebrush Flat but instead be diverted to the surrounding pinyon-juniper areas. UDWR recommends all reasonable measures should be taken to avoid and reduce the effects of surface disturbing activities in occupied sage-

grouse strutting, nesting, or brood-rearing habitat and core winter use areas, particularly Harmon Canyon and Sage Brush Flats

Alternative C. Transportation Reduction Alternative, page ES4.

This alternative mentions daily use of the Peter's Point, Prickly Pear and Flat Iron airstrips. In the case of wintering sage-grouse, particularly on Peter's point, low flying airplanes may result in sage-grouse avoiding those patches.

Page 4-116. UDWR recommends that road realignment for sage-grouse and big game should not be evaluated as a compensatory mitigation credit, but should be considered as an example of Best Management Practices (BMP), which should be considered by the appropriate road authority.

General Comments

UDWR would like an assessment of the number of wells that may be ultimately developed within the project area, and considers the cumulative effects of other activities nearby that have similar and compounding negative effects on wildlife, particularly mule deer and sage-grouse. Two main neglected items are the Questar pipeline upgrade that removed a significant proportion of the available winter range for sage-grouse on Harmon Canyon, and other leases in the same area such as Petro-Canada's leases on upper elevations of the Tavaputs Plateau.

The UDWR's crucial wildlife habitat data are based on more than 20 years of data collection and wildlife observations by field biologists. These data are available to the public on the UDWR web site: (http://dwrcdc.nr.utah.gov/ucdc/DownloadGIS/disclaim.htm) and should be considered under all EIS/RMP alternatives. For complete NEPA analysis, these data and potential impacts to crucial deer and elk habitat should be considered under all alternatives.

Specific Comments

Page 3-91. Data is not current. Current data are as follows – official mule deer population estimate for April 2007 was 2,950 deer, which is 51% of the population objective. The buck/doe objective should be 15 to 20 bucks per 100 does, not merely 15 bucks/100does.

Figure 3.9.1 is incorrect. The population objective was changed in 2004 from 6,000 deer down to 5,800 deer to account for the loss of habitat due to oil and gas development. This is stated in previous pages but is not reflected in the graph. Also the 2006 deer population was 2,800 and the 2007 deer population was 2,950.

Page 3-95. The 2nd paragraph should mention that the elk objective will be proposed for change at the Utah Wildlife Board Meeting April 9, 2008. The new objective is 1,350 elk south

of the Nine Mile Canyon Road and 250 elk north of the Nine Mile Road and west of the Argyle Canyon Road. Figure 3.9-3 should be updated.

Page 3-95 last paragraph, last sentence should read, "bighorns have been documented using the lower reaches of Jack Canyon throughout the year and especially during lambing season. This area extends as far north as Horse Bench and Nine Mile Creek to as far south as Flat Canyon."

Page 3-21. First paragraph. The term 'brooding habitat' for sage-grouse should be changed. It is crucial spring/summer/fall and sometimes winter range. The term 'brooding' refers to the period in mid-June and early July when chicks are coming off the nest.

Page 3-133. Bighorn sheep should be added to the list of species hunted in the project area. Hunting is allowed for both bighorn sheep and pronghorn in the area. It should also state that hunting seasons begin in late summer and extend to January 31.

Page 4-116 paragraph 1. Increased roads and infrastructure also indirectly increase access for poaching and harassing of wildlife as well as increased hunter access and success.

Page 4-116. The wildlife mitigation plan should include Bighorn Sheep as one of the target species

Page-4-118. The private AUMs owned by BBC in the Stone Cabin allotment (roughly 120 AUMs) will be reserved to provide private AUMs for elk. This needs to be articulated in this document. (See *Nine Mile Elk Plan 2008*)

Page 4-118. The last part of the 2nd paragraph is not completely true. Dixie harrow projects remove only about 40% of the mature sagebrush cover. This will still result in suitable and in some cases improved habitat for sage sparrows, sage thrashers and Brewer's sparrows.

Page 4-122 paragraph 3. September – October is not calving season; it is the breeding season.

Page 4-124. It should be added that as Rocky Mountain bighorn sheep continue to expand their range northward they will inhabit Nine Mile and Cottonwood canyons where vehicle collisions should be noted as a concern.

Page 4-136 and 137. Alternative C, the Transportation Reduction Alternative, paragraph 4 on page 137 is incorrect. While all of the transportation reduction measures will <u>reduce</u> the effects to mule deer it will not remove them altogether.

Page 4-165 paragraph 2. Sentence one is incorrect. Numerous citations have linked oil and gas development to precipitous declines in sage-grouse populations. For example Holloran, 2005 University of Wyoming Dissertation, Doherty et al. 2006 *JWM* 72(1), Walker et al. 2006,

JWM 71(8), Lyon and Anderson 2003 *Wildl. Soc. Bull.* 31, and Crompton and Mitchell (2005 unpubl. report, Utah DWR) have all linked population reductions in response to development. Furthermore Walker et al. specified sage-grouse avoidance of oil and gas development specific to winter ranges. However, in addition, unpublished data exists which may alter these conclusions.

Page 4-201. "Hunting and Fishing." It should be added that hunt season dates extend from mid August in to late January. The second paragraph states that hunting opportunity would not change because it is a limited entry unit, however, that is only true for bull elk and does not apply to general season buck deer hunters who may be impacted.

Figure 3.10-2, Sage-grouse Year-round and Winter Habitats should be updated.

Section 2.1.4. Interim Reclamation. UDWR requests specific information should be stated on the seed mix and grazing plan. It is inadvisable to graze during interim reclamation as seedlings are very sensitive and would have difficulty becoming established with grazing. Bare-root stock plantings of sagebrush may be better at establishing plants although it is significantly more expensive and less efficient than properly designed seedings. If there is a specified seed mix, it should also be stated in this section.

Page 4-116. UDWR recommends that road realignment for sage-grouse and big game should not be a compensatory mitigation credit, but should be considered as Best Management Practices regularly enforced by the appropriate road agency.

Page 4-117 paragraph 3. This occurs in all alternatives. There is ample acreage of pinyon-juniper both in the project area and Carbon County. UDWR strongly agrees with paragraph 4, which states that the value of improving sagebrush habitat greatly outweighs the loss of some pinyon-juniper community.

Page 4-118. There needs to be a long-term commitment to properly managed grazing on the Stone Cabin allotment. Mitigation projects involving reseeding efforts will need to be rested from grazing for several growing seasons after treatments.

BBC's Wildlife Mitigation Plan

There are discrepancies in long-term disturbance acres in BBC's Wildlife Mitigation Plan and the EIS. BBC notes their long-term disturbance acres as 2,080 (Appendix B, pp.9). The EIS states the long-term disturbance acres as 1,864 (pp. 4-117). UDWR acknowledges and appreciates that BBC has included a long-term disturbance acreage amount totaling more than that included in the EIS.

In Chapter 5 (pp. 5-30,31) of the EIS Cumulative Impacts and Reasonably Foreseeable Development section it states, "cumulative surface disturbance (and thus wildlife habitat loss) caused by oil and gas activity in the Price Field Office area would account for 17,951 acres.

Natural gas development under this EIS Proposed Action would account for approximately 3,656 acres of this cumulative habitat loss to wildlife." Research shows that impacts to wildlife extend beyond well pads and roads. Long-term disturbance includes more than simply the acres directly developed, and should encompass indirect disturbance which lasts long after the planned development. We note that BBC has, in their proposed mitigation ratios, effectively supported compensatory mitigation for indirect effects.

Specific Comments

Page 1, bullet number 3 is incorrect. Numerous studies with sound statistical design have documented coal-bed natural gas development impacts to sage-grouse.

Page 2, **Goals** section. This section should also include bighorn sheep as one target species.

Page 3, **Proposed Project Lands** section. BBC intends to use BBC owned lands for mitigation. It should be stated that these lands in addition to surrounding BLM, State, and private lands would be managed for mitigation. UDWR supports and appreciates the notion of using these lands for the benefit of wildlife. However, a concern is that these BBC properties are off site and BBC does not own the mineral leases. That said, can they have a definite say in what happens on the property for the benefit or detriment to wildlife? It would be important to ensure that applicant-committed mitigation measures are (a) sufficiently implementable and (b) actually committed to in an enforcible NEPA decision document.

Page 3, **Mitigation Planning Process** section. The mitigation planning process should be continued through the life of the project instead of a minimum of 10 years or five years after active development is completed. Disturbance is also present through the production phase of the project (Wyoming Game and Fish Department). Mitigation through the production phase would not be performed at the same magnitude as during development, however it would serve a valuable purpose for wildlife needs as they continue to change over time, and as impacts continue to affect wildlife populations.

Page 5, **Road Realignment** section. The telemetry study funded by BBC did not end in 2006 but has continued through 2008. Figures 2 and 3 are referenced but are not included in this document. We feel that road realignment should be considered a Best Management Practice and be a standard operational requirement by the BLM and not a compensatory mitigation credit. Also, the Harmon Canyon (Prickly Pear) road re-route location should be reconsidered due to updated 2007 information showing that sage-grouse use the airstrip.

Page 6, **Habitat Improvement and Connectivity** section. Figure 4 is referenced but not included in the document. UDWR anticipates working with the BLM and BBC on this 1,500-acre habitat enhancement project. BBC is planning on conducting 2 separate projects on Sagebrush Flat and Prickly Pear mesas totaling 1907 acres in the 2008 season. These projects are

from a past mitigation commitment for 3,700 acres. The UDWR appreciates BBC proposing these projects to the Utah Partners for Conservation and Development (UPCD), however, we want to ensure these projects are kept separate from the 1,500 acres proposed with the initial 30% mitigation in BBC's Wildlife Mitigation Plan

Page 6, **Wet Meadow/Summer Range Enhancement** section.

We recommend specifying which areas BBC is proposing to treat.

Page 7, **Grazing Practices** section.

This section specifies 2 years rest during the '08 and '09 seasons, one year for past commitment and one year for the initial 30% mitigation. UDWR's understanding was that BBC committed 2 years rest as a past commitment. UDWR recommends this section state that a total of three years rest will be conducted, 2 years for past commitments for winter drilling, and 1 additional year for the initial 30% mitigation included in this wildlife management plan. Additionally, we recommend that this section of the wildlife mitigation plan also include that the other allotments under BBC control will be managed for wildlife through the same 3 years, and beyond, through appropriately designed grazing practices.

The tools noted in the first paragraph of the "Grazing Practices" section, namely: "stocking rates, fencing needs, pasture rotation, salt placement, and spring and wetland protection" are considered regular grazing management practices that should logically and coherently be regulated by the BLM in order to maintain healthy rangelands that sustain all users, wildlife included. As such, these practices should not be proposed as mitigation measures. It is the BLM's stewardship and responsibility to ensure that their lands are naturally managed for multiple uses including Utah's wildlife.