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August 13, 2002

Mary Bloom
EIS Coordinator
Bureau of Land Management
111 Garryowen Road
Miles City, MT 59301



Re: Statewide Oil and Gas Environmental Impact Statement and Amendment of the Powder River and Billings Area Resource Management Plans

Dear Mary,

On behalf of the Northern Cheyenne Tribe, I am pleased to submit the Northern Cheyenne Tribe's Proposed Mitigation Plan for consideration by the Bureau of Land Management (BLM) as part of the Statewide Oil and Gas Environmental Impact Statement (EIS) and Amendment of the Powder River Resource Management Plan (RMP) for coal bed methane (CBM) development. The Tribe believes that the measures contained in its Mitigation Plan are the minimum required to meet the BLM's trust responsibility to protect the trust lands and resources of the Northern Cheyenne Reservation, and to mitigate the economic, social and cultural impacts of CBM development on the Tribe.

The Tribe's Mitigation Plan also is intended to serve as the Tribe's comments on the Preliminary Final Environmental Impact Statement (PFEIS) and to supersede BLM's Proposed Native American Mitigation Options paper. It is our understanding that BLM will include the Tribe's Mitigation Plan as an appendix to the FEIS.

The Tribe would like to meet with BLM either in Billings or Lame Deer during the week of August 26 to discuss the Mitigation Plan. Because the Tribe's Plan is so detailed and comprehensive, we believe an all-day meeting would be appropriate. Please let me know as soon as possible when BLM would be available for such a meeting.

Very truly yours,

ZIONTZ, CHESTNUT, VARNELL
BERLEY & SLONIM


John B. Arum

pc: Geri Small, Tribal President
Ernie Robinson, Ad Hoc Committee
David Millegan, Environmental Protection Department

NORTHERN CHEYENNE TRIBE'S PROPOSED MITIGATION PLAN

August 13, 2002

The Northern Cheyenne Tribe submits the following measures for consideration by the Bureau of Land Management (BLM) as part of the Statewide Oil and Gas Environmental Impact Statement (EIS) and Amendment of the Powder River Resource Management Plan (RMP) to address coal bed methane (CBM) development. The Tribe believes that these measures are the minimum required to meet the BLM's trust responsibility to protect the trust lands and resources of the Northern Cheyenne Reservation, and to mitigate the economic, social and cultural impacts of CBM development on the Tribe.

I. PROTECTION OF RESERVATION NATURAL RESOURCES.

The BLM, like all federal agencies, is subject to the federal trust responsibility. Seminole Nation v. United States, 316 U.S. 286, 296-97 (1942); Nance v. Environmental Protection Agency, 645 F.2d 701, 711 (9th Cir.), cert. denied, 454 U.S. 1081 (1981); Northern Cheyenne Tribe v. Hodel, 12 Ind. L. Rep. 3065, 3071 (D. Mont. 1985). "The law is 'well established that the Government in its dealings with Indian tribal property acts in a fiduciary capacity.'" Lincoln v. Vigil, 508 U.S. 182, 194 (1993) (quoting United States v. Cherokee Nation, 480 U.S. 700, 707 (1987)). Even where no formal trust has been established, a fiduciary relationship arises when the Government assumes elaborate control over property belonging to Indians. United States v. Mitchell, 463 U.S. 206, 225 (1983).

Because the Federal government exercises control over the mineral, air and water resources of the Northern Cheyenne Reservation, all of which are held in trust for the Tribe by the United States, it has an obligation to manage and protect these resources for the benefit of the Tribe and its members. In the 1926 Northern Cheyenne Allotment Act, Congress provided that the mineral resources on the Reservation were reserved for benefit of Tribe and may be leased by the Federal government with the Tribe's consent "under such rules and regulations as the Secretary of the Interior may prescribe." Northern Cheyenne Tribe v. Hollowbreast, 425 U.S. 649, 651 (1976). Likewise, Congress provided in the 1992 Northern Cheyenne Reserved Water Rights Settlement Act that the Secretary of the Interior would "administer and enforce" the Tribe's reserved water rights pending the Tribe's adoption and the Secretary's approval of a Tribal water code. Pub. L. 102-374 (Sept. 30, 1992), § 5(a).

Where such close Federal control over Reservation resources exists, the government has a strict fiduciary obligation to protect these resources and manage them in the best interests of the Tribe and its members. Mitchell, 463 U.S. at 225; Cobell v. Norton, 240 F.3d 1081, 1100 (D.C. Cir. 2001). The government may not compromise its obligation to protect the water rights and mineral resources of the Northern Cheyenne Reservation when managing its own lands and resources. See, e.g., Parravano v. Babbitt, 70 F.3d 539, 546 (9th Cir. 1995); Joint Board of Control v. United States, 832 F.2d

1127, 1132 (9th Cir. 1987); Pyramid Lake Paiute Tribe v. Morton, 354 F. Supp. 252, 256-57 (D.D.C. 1973). This is especially true in this case where the government seeks to benefit financially, in the form of bonuses, rents and royalties, from development of federally-owned CBM resources. United States v. Creek Nation, 295 U.S. 103, 110 (1935).

Even where off-Reservation energy development would not directly physically imperil and damage the Reservation's natural resources, the courts have held that the BLM has fiduciary obligations to consider and protect Tribal socioeconomic and cultural interests jeopardized by off-Reservation federal mineral development. In Northern Cheyenne Tribe v. Hodel, 12 Ind. L. Rep. 3065, 3071 (D. Mont. 1985), the Court held:

[T]he special relationship historically existing between the United States and the Northern Cheyenne Tribe obligated the Secretary to consider carefully the potential impacts to the tribe resulting from the lease sale of federal coal tracts lying adjacent to or near the Northern Cheyenne Reservation. Ignoring the special needs of the tribe and treating the Northern Cheyenne like merely citizens of the affected area and reservation land like any other real estate in the decisional process leading to the sale of the Montana tracts violated this trust responsibility. Once a trust relationship is established, the Secretary is obligated, at the very least to investigate and consider the impacts of his action upon a potentially affected Indian tribe. If the result of this analysis forecasts deleterious impacts, the Secretary must consider and implement measures to mitigate these impacts if possible.

Id. at 3071.

Like off-Reservation coal development, full-scale CBM development surrounding the Reservation will result in serious cultural and socioeconomic impacts to the Tribe and its members. In addition, such development will damage the Reservation's mineral estate, air and groundwater resources, all held in trust for the Tribe. The development will also damage surface water resources and agricultural lands held in trust for the Tribe and its members.

The Preliminary Final Environmental Impact Statement (PFEIS) prepared by BLM forecasts that off-Reservation CBM production will deplete and damage the water and mineral resources of the Reservation itself. See, e.g., PFEIS at 4-51 ("tribe can expect drawdown of coal seam aquifers from CBM wells within 14 miles of the reservation, and this drawdown would impact water wells and springs within the reservation"); and 4-70 ("CBM development would threaten to drain methane resources under tribal lands in the planning area"). The PFEIS also predicts that the discharge of untreated CBM water into rivers and streams passing through the Reservation would render them "unusable for irrigation." Id. at 4-54. Finally, the PFEIS concludes that NO₂ concentrations resulting from full-field CBM development could exceed the PSD Class I increment for the Northern Cheyenne Reservation. Id. at 4-22. As a fiduciary with an obligation to protect the Tribe's trust assets, the BLM must do more than merely reduce or seek arrangements for post hoc

compensation for the damage to trust resources, it must prevent these impacts from occurring at all.

Unfortunately, none of the action alternatives presently under consideration fully protect Northern Cheyenne trust assets. According to the PFEIS, all of the action alternatives, including the preferred alternative, are likely to result in significant and unmitigated damage to trust assets, including the drawdown of Reservation groundwater, pollution of the Reservation's pristine air quality, the drying up of Reservation wells and surface springs, and the draining of Reservation gas resources. See PFEIS at 4-69 - 4-74. In addition, depending on the efficacy of proposed mitigation measures, full scale production of coal bed methane may result in degradation of the Tribe's reserved surface waters which Tribal members rely on for irrigation and the long-term productivity of its agricultural lands. Id. at 4-72. Finally, the PFEIS indicates that CBM development will have significant, unavoidable impacts on Reservation fish and wildlife resources that Tribal members depend on for subsistence. Id. at 4-135 - 4-148.

It is necessary for BLM and other Federal agencies to develop and implement additional, special measures to protect the Tribe's trust assets from the likely adverse impacts of off-Reservation CBM development. In addition, the environmental analysis and mitigation measures must address the cumulative impacts of all present and future energy development in the region, including especially the projected Otter Creek coal mines and power plant and the Tongue River Railroad. The current PFEIS ignore these adjoining projects. The following proposals are designed to assist BLM in the development of an alternative that fulfills the Federal government's fiduciary duty to safeguard the Tribe's natural resources.

A. Protection of Reservation Groundwater.

The Northern Cheyenne Tribe and Its Reservation – 2002 (April 2002), a narrative report prepared by the Tribe under contract with the BLM ("Narrative Report"), highlights the importance of groundwater resources to the Tribe and its members. The Tribe has a reserved right, recognized in the congressionally-confirmed Northern Cheyenne Water Compact, to the alluvial groundwater underlying the Reservation. Narrative Report at 6-26. The Compact does not address the Tribe's right to use the Reservation's non-alluvial groundwater. Each of the five Reservation communities (Ashland, Birney, Lame Deer, Muddy Cluster and Busby) relies on groundwater withdrawals as the sole source of water for domestic, commercial, agricultural and municipal use. Narrative Report at 6-37. Tribal ranchers also rely on wells for domestic use and stock watering. Id. at 3-36, 6-38.

It is likely that the Tribe's use of groundwater will increase in the future as the Tribe slowly upgrades the Reservation's inadequate water infrastructure to meet community needs. See Narrative Report at 5-7 - 5-10. In addition, the Tribe may choose to use the Reservation's groundwater resources to provide for future economic development, including the development of its valuable coal reserves. Id. at 6-40.

Groundwater is also important to the Tribe because it feeds natural springs both on and off the Reservation. The Tribe's Narrative Report emphasizes the cultural importance of springs to the Northern Cheyenne. The Cheyenne believe that springs are living beings with spirits. Narrative Report at 7-12. Failure to protect culturally important springs on the Reservation from the effects of groundwater drawdown will constitute an irreversible cultural and spiritual impact to the Northern Cheyenne Tribe.

The mitigation measures proposed in the PFEIS, including the two-mile buffer proposed in Alternative B, are not intended to prevent impacts to the Reservation's groundwater resources. Instead, the PFEIS assumes that adverse impacts will occur to the Reservation's groundwater resources and proposes that CBM operators will somehow compensate for these impacts after the fact by "replacing" water lost from groundwater wells. PFEIS at 4-70. The PFEIS does not suggest what water sources would be used to replace Reservation groundwater or what financial assurances would be in place to ensure that CBM producers would actually pay for development of alternative water supplies. Such "mitigation" measures are not adequate to fulfill BLM's trust responsibility to protect the trust assets.

Mitigation based on "replacing" lost groundwater does not adequately protect the Tribe's existing and future uses of its water resources. The cultural and spiritual value of natural springs can never be "replaced." Furthermore, there will inevitably be time lags and uncertainties between the detection of impacts and the development of alternative water sources. During this time, whole communities may be without water. Additionally, the loss of *in-situ* groundwater resources will compromise the Tribe's ability to make more intensive use of its water resources in the future to meet its existing needs and provide for future economic development, including potential development of its coal reserves. Narrative Report at 6-40. It is uncertain whether replacement water is available to meet existing demands, much less the demands posed by future economic development projects. See PFEIS 4-50 ("in areas of concentrated depletion . . . water supplies may not support water replacement).

To fully protect the Tribe's water resources from drawdown the following measures are necessary:

1. Buffer Zone. An initial buffer zone of 14 miles will be maintained around the Northern Cheyenne Reservation exterior boundaries. This is the minimum necessary to assure that Reservation groundwater resources are not adversely affected by off-Reservation CBM development. According to the PFEIS:

The drawdown or depletion of the groundwater table within the vicinity of a producing Montana CBM field has been modeled by the [Montana Bureau of Mines and Geology] at up to 14 miles from the edge of production (Wheaton and Metesh 2001). Without site-specific information, it is impossible to predict the degree of drawdown to a neighboring aquifer.

PFEIS at 4-69.

2. Groundwater Monitoring. The BLM will not issue permits to drill within the 14-mile buffer zone until sufficient hydrological information exists to clearly and convincingly demonstrate that CBM production closer to the Reservation will not cause drawdown of Reservation groundwater resources. Prior to and in the first years of CBM development outside the 14-mile buffer zone, BLM will conduct intensive monitoring within the 14-mile buffer zone to generate site-specific information regarding local aquifer drawdown. Monitoring wells (nested piezometers) will be installed within the buffer zone on the order of at least one cluster per township. A cluster would include well screens in appropriate coal seams, overlying aquifers and alluvial aquifers. More monitoring wells may be necessary as development increases in the basin and/or water-level declines are observed. The monitoring wells will be located on federal land or, if possible, on private or state land by negotiation. The wells will be installed as soon as possible before production begins to ensure that adequate baseline data is available (at least three years). Water-level measurements will be obtained from each cluster at least once a month. If declining water levels are observed through monthly data collection, a continuously recording data-logger will be installed in the monitoring well to more accurately determine changing water levels. The Tribe will be privy to the design and results of this groundwater monitoring program.

3. Federal Development within Buffer Zone.

a. Groundwater modeling based on the site-specific information generated by the above intensive monitoring program will be used by BLM in consultation with the Tribe to determine, in clear and convincing fashion, whether and to what extent federal CBM production can occur within the 14-mile buffer zone without causing drawdown of Reservation groundwater. At least five years of intensive monitoring of the effects of CBM production outside the buffer zone will be required before making any decision on whether to proceed with development within the buffer zone. Such decision will be made in consultation with the Tribe.

b. BLM will not issue permits to drill within the buffer zone until sufficient information exists to clearly and convincingly demonstrate that such production will have no adverse effect on Reservation aquifers. Any decision to proceed with drilling within the buffer zone will be made in consultation with the Tribe and consider the likely cumulative impacts from State-authorized production of CBM resources associated with State and private lands. Authorization of federal CBM production within the buffer zone will begin with those tracts farthest from the Reservation which have the least potential to affect Reservation groundwater resources.

c. After commencement of production, monitoring of groundwater will be expanded to verify that CBM production does not result in any drawdown of Reservation groundwater, all in consultation with the Tribe. Prior to production, monitoring wells (nested piezometers) will be installed along the northern and eastern boundaries of the Reservation on the order of at least one cluster (see § 2, above) per adjacent township. More wells

may be necessary as development increases in the basin and/or water-level declines are observed. The wells will be installed as soon as possible before development to ensure that adequate baseline data is available (at least three years). Water-level measurements will be obtained from each cluster at least once a month. If declining water levels are observed through monthly data collection, a continuously recording data-logger will be installed in the monitoring well to more accurately determine changing water levels.

4. State-Authorized Development within Buffer Zone.

a. If prior to the decision to proceed with Federal development of CBM resources within the 14-mile buffer, the State authorizes CBM development within the buffer, the Federal government will act to protect the Tribe's groundwater resources by funding the on-Reservation groundwater monitoring outlined above.

b. Prior to any State-authorized CBM development, the BLM and other Federal agencies will assist the Tribe in negotiating and obtaining agreements with the State of Montana and private landowners to protect Tribal resources from such development. Such agreements may well require: (a) installation of a hydrologic barrier consisting of a series of wells between the Reservation and developing fields that inject water into the coal seam(s) to maintain the hydrostatic pressure in the formation and prevent the depletion of groundwater; (b) provision of alternative water supplies by drilling deeper wells or conveyance of water from locations not affected by CBM development; and (c) compensation to the Tribe and its members for any accrued damage.

5. Remedies for Damage to Reservation Groundwater Resources.

a. If monitoring wells located along the Reservation boundary detect measurable water level declines from the baseline, BLM will immediately halt any federally authorized production within the buffer zone.

b. The United States will also take legal action on behalf of the Tribe (or fund legal action by the Tribe) to halt any State-authorized production that is causing such water level declines on the Reservation and to obtain compensation for all accrued damage to the Tribe and its members.

B. Protection of Reservation CBM Resources.

According to the PFEIS, CBM production in the vicinity of the Reservation could well drain the Reservation's own CBM resources:

Modeling by the Montana Bureau of Mines and Geology suggests that the hydrostatic head of a producing coal seam could be reduced sufficiently to cause methane liberation at distances more than 5 miles from a producing CBM field. The reduction of hydrostatic pressure achieved by lowering the water table within a specific coal seam is necessary for CBM production.

This reduction liberates the methane held in the coal matrix; however, the complex site-specific aquifer conditions dictate the actual radius of methane drainage. Therefore conclusions regarding methane drainage from tribal minerals need to be made on a case-by-case basis during development. CBM development would threaten to drain methane resources under tribal lands in the planning area.

PFEIS at 4-70 (emphasis added).

The PFEIS proposes no mitigation for loss of Reservation CBM resources other than monitoring of CBM drainage and Tribal development of Reservation CBM resources to “ensure the Tribes receive their fair share of the CBM revenues.” Id. These so-called “mitigation” measures are patently inadequate to fulfill the government’s fiduciary duty to protect Reservation mineral resources from expropriation by third parties. The Tribe should not be coerced into incurring the unavoidable physical, socioeconomic and cultural impacts associated with CBM production to facilitate off-Reservation development. (Although the Tribe may one day consider on-Reservation CBM development if extraction technology improves to the point where the resource can be exploited without causing severe environmental impacts, it should not be forced by its trustee to develop before it is willing to do so.) Financial compensation for lost Reservation CBM resources would not be an adequate remedy for drainage of CBM resources given substantial uncertainties about: the availability of such compensation; how it would be calculated; the extent to which it would also redress accompanying damage to other Tribal resources; and the commitment and capability to adequately monitor the drainage and accompanying damage to other Reservation resources and values.

The buffer zone policy described in Section I.A above is also necessary to protect against drainage of Reservation CBM. The following measures are also necessary:

1. CBM Monitoring. The groundwater monitoring described in Section I.A will also include close monitoring of hydrostatic pressure and analysis of CBM drainage within the buffer zone.

2. Federal Development within Buffer Zone. In addition to satisfying the conditions regarding groundwater set forth in Section I.A.3.a and b:

a. BLM will not issue permits to drill within the 14-mile buffer zone until sufficient information exists to clearly and convincingly demonstrate that CBM production will not drain Reservation methane resources. Any decision to proceed with production within the buffer zone will be made in consultation with the Tribe and consider the likely cumulative impacts on Reservation CBM reserves from State-authorized production of State and private CBM resources.

b. At least five years of intensive monitoring of CBM drainage from CBM production outside the buffer zone will be required before any decision to proceed with development within the buffer zone.

c. Authorization of federal CBM production within the buffer zone will begin with those tracts farthest from the Reservation which have the least potential to drain Reservation CBM resources.

d. After commencement of production, CBM drainage monitoring will be implemented along the Reservation boundary as provided in Section I.A. above to verify that CBM production does not result in any drainage of Reservation methane resources.

3. State-Authorized CBM Development within Buffer Zone.

a. If prior to the decision to proceed with Federal development CBM resources within the 14-mile buffer, the State authorizes CBM development within the buffer, BLM and other Federal agencies will protect the Tribe's CBM resource by funding a full characterization of Reservation CBM resources and on-Reservation monitoring of CBM drainage.

b. Prior to any State-authorized CBM development within the 14-mile buffer zone, the BLM and other Federal agencies will assist the Tribe in negotiating and obtaining agreements with the State of Montana and private landowners to protect Reservation CBM resources. Such agreements may well require: (a) installation of a hydrologic barrier consisting of a series of wells between the Reservation and developing fields that inject water into the coal seam(s) to maintain the hydrostatic pressure in the formation and prevent the drainage of CBM and (b) financial compensation to the Tribe or Tribal allottees for any CBM drained from Reservation lands and any other associated damage.

4. Remedies for Damage to CBM Resource.

a. If monitoring wells located along the Reservation boundary detect CBM drainage, BLM will immediately halt any federally authorized production within the 14-mile buffer zone.

b. The United States will take legal action on the Tribe's behalf (or fund legal action by the Tribe) to halt any State-authorized production that is found to be draining CBM resources from the Northern Cheyenne Reservation and to obtain compensation for all accrued damage to the Tribe and its members.

5. Northern Cheyenne Involvement in Monitoring and Analysis. Training and employment will be provided to qualified and available Tribal members to involve them, to the fullest extent feasible, in all programs set forth in this Mitigation Plan to monitor and analyze effects on Reservation groundwater, CBM resources, surface water, air quality, subsistence and cultural sites and values.

C. Reservation Surface Water.

The Northern Cheyenne Tribe has reserved rights to the waters of the Tongue River, Rosebud Creek and the Bighorn Reservoir. The Tongue River and Rosebud Creek

are presently used by Tribal members to irrigate crops, including hay, alfalfa seed and corn. Although only about 1,794 acres of Reservation land are presently irrigated, as much as 10,000 acres of Reservation land along the Tongue River and Rosebud Creek are potentially irrigable if Reservation irrigation systems were fully funded and developed. Narrative Report at 6-34 - 6-35.

The Tribe's ability to put its reserved water rights to beneficial use for agricultural purposes could be severely compromised by untreated discharges of CBM production water into Rosebud Creek and the Tongue River. According to the PFEIS, the discharge of untreated CBM produced water to these streams would render them "unusable for irrigation based on the EC-SAR relationship that represents no reduction in infiltration." PFEIS at 4-54. Assuming a SAR threshold of 2 (the limit provided for in the Tribe's surface water quality standards for the Tongue River and Rosebud Creek), very little, if any, CBM discharge can be accommodated. Id. Discharge of untreated CBM production water would also likely increase suspended sediments, making the water unsuitable for drinking except after treatment. Id.

The approach to protecting water quality advocated by BLM in its preferred alternative (Alternative E) is inadequate to meet BLM's trust responsibility to protect the Tribe's reserved water rights. Under this alternative, the task of protecting Reservation water quality from upstream discharges would be deferred to water management plans to be developed by project operators. In practice, however, water quality protection would be largely delegated to the State of Montana through issuance of state water quality certifications under Section 401 of the Clean Water Act and State NPDES permits under Section 402 of the Clean Water Act. See Draft EIS at 2-8. There is no guarantee that State certifications and permits will adequately protect the Tribe's reserved water rights. Furthermore, the Tribe lacks the resources to review and comment on the adequacy of each operator's water management plan and to ensure that State permits and certifications adequately protect Reservation water quality. Narrative Report at 4-11 - 4-12.

To prevent impacts to existing and future beneficial uses of its reserved water rights, BLM should require the following measures:

1. Reinjection or Treatment. All produced water from development of federal CBM resources upstream of the Reservation in both Montana and Wyoming will either be reinjected (as provided for in DEIS Alternative B) or treated prior to discharge to meet the Northern Cheyenne Tribe's surface water quality standards (as provided in DEIS Alternative D). A special emphasis is placed on the Sodium Adsorption Ratio (SAR) and Electrical Conductivity (EC) parameters, especially during the irrigation season. This is critical to protecting the Tribe's water rights and current and future beneficial uses of and Tribal livelihoods along these waters. Surface water flow and quality will be monitored to ensure that illegal discharges are not occurring. BLM or other Federal agencies will provide the Tribe with funding to cover the costs of surface water monitoring on the Reservation.

2. Effluent Guidelines and Standards of Performance. To address discharges of CBM production water from State-authorized development in Montana and Wyoming, EPA will promulgate effluent limitation guidelines under Section 304(b) of the Clean Water Act and/or national standards of performance for CBM production wells under Section 306 of the Act. These standards and guidelines will require reinjection or treatment of produced water from new production wells. In addition, BLM and EPA, in conjunction with the Tribe, will encourage the States of Montana and Wyoming to negotiate a permanent agreement which includes the Tribe as a contracting party and which requires the State of Wyoming to prevent degradation of the Tongue River from Wyoming-authorized discharges. The current interim agreement pertains only to the Powder and Little Powder River and does not include the Tribe as a contracting party.

D. Reservation Air Quality.

In 1977, the Northern Cheyenne Tribe designated its airshed as Class I, the most pristine standard available under the Clean Air Act. This redesignation is indicative of the great value placed by the Northern Cheyenne on the crystalline air quality that normally exists on the Reservation. The Reservation's Class I designation, while protecting the Reservation's air quality, also constrains economic development opportunities by allowing only small incremental increases in allowable ambient air pollution levels. The Tribe has an interest in preserving the available pollution increment on the Reservation for its own use so that the Tribe can achieve economic development on the Reservation without compromising the Reservation's pristine air quality. The BLM has a trust obligation to protect the available air quality increment on the Reservation for the Tribe's own use.

Air quality concerns arise from the numerous disturbances to the natural ground cover from well pad construction and unpaved roads. In addition, natural gas compressors will emit pollutants during operations. The PFIES concludes that it is "possible" that full-field development will result in a violation of the PSD Class I NO₂ increment for the Northern Cheyenne Reservation. However, the document proposes that a regulatory "PSD Increment Consumption Analysis" would not be conducted until the permitting stage by an "appropriate air quality regulatory agency." PFEIS at 21.

The Tribe proposes the following measures to protect the Reservation's air quality and Class I increment:

1. Increment Analysis and Prevention of Significant Deterioration. The FEIS will include a regulatory "PSD Increment Consumption Analysis" for all relevant parameters and analyze the impact of such consumption on the potential for future economic development on the Reservation. It is not acceptable to the Tribe that this analysis be done in a piecemeal fashion as CBM wells and compressor stations are permitted. On the basis of this increment consumption analysis, BLM's record of decision must provide for a development plan which is not likely to result in significant consumption of the Reservation's PSD Class I increment for any relevant parameter.

2. Mitigation. The BLM should implement all measures to minimize air quality degradation suggested in Alternative B of the PFEIS. These include: appropriately surfacing roads and well locations to reduce fugitive dust generated by traffic; applying dust suppressors; enforcing speed limits on all project roads; minimizing construction of roads; air quality; requiring use of natural gas-fired and electric compressors; and optimizing the number of wells connected to one compressor.

3. Monitoring. The BLM and other Federal agencies will assist the Tribe in carefully monitoring impacts to the Reservation's air quality, including consumption of the Class I increment. Air quality monitoring should be conducted on the southern and eastern boundaries of the Reservation by continuous real time monitoring systems to ensure that Class I standards are not exceeded and that substantial consumption of Class I increment is not being consumed. Areawide monitoring will also occur within the 14-mile buffer zone. The location and frequency of air-quality monitoring will be determined based on the level of production in particular areas and climatic conditions.

4. Modeling. BLM should regularly update the air quality model developed as part of the NEPA process as new data is collected within the basin. If the updated model forecasts unanticipated impacts on Reservation air quality, BLM will take corrective action to limit further CBM development in the vicinity of the Reservation.

5. Remedies. If monitoring and modeling finds that off-Reservation CBM development is causing or threatening to cause significant consumption (to be precisely defined for each relevant air quality parameter in consultation with the Tribe) of the Reservation's Class I increment for any relevant parameter, BLM will take measures to restrict the timing or location of CBM development in the vicinity of the Reservation so that consumption of the air quality increment will be reduced to less than significant levels.

E. Reservation Wildlife Resources.

Populations of big game animals whose range includes the Northern Cheyenne Reservation should be considered trust resources even during seasons when these animals are found off the Reservation. The Tribe's Narrative Report discusses the economic importance of wildlife resources to the Northern Cheyenne. A survey conducted on the Reservation found that 84 percent of Tribal members hunt on the Reservation, while only 30 percent hunt off the Reservation. Animals hunted include deer, elk, bear, bobcat, and coyotes as well as smaller game. Birds hunted include sage hen, grouse, quail, turkeys, and prairie chickens. Deer were the most commonly sought big game and pheasants the most commonly sought bird. Narrative Report at 3-38.

The PFEIS concludes that "virtually every wildlife species that occurs within CBM development areas would be impacted" by CBM development, including big game animals such as deer, elk and antelope. See PFEIS at 4-144. Notably, the PFEIS forecasts significant impacts to wildlife even under Alternative B, an alternative that supposedly "emphasizes" protection of wildlife resources. PFEIS at 4-144. The PFEIS concludes that full-scale CBM development near the borders of the Reservation would disrupt migratory

pathways of some wildlife, and result in impacts from vehicular traffic, hunting, and noise. Id. However, the DEIS contains no analysis whatsoever of the effects these impacts would have on the abundance of wildlife on the Northern Cheyenne Reservation.

The lack of analysis of impacts to Reservation wildlife resources violates the federal trust responsibility. See Klamath Tribes v. United States, 1996 WL 924509 (D. Or. 1996) (issuing injunction prohibiting Forest Service from proceeding with "salvage" logging that will affect wildlife resources within the Tribes' former reservation, without ensuring, in consultation with the Klamath Tribes on a government-to-government basis, that the resources on which the Tribes' treaty rights depend will be protected). In order to fulfill its trust responsibility, BLM must more thoroughly consider and protect Reservation wildlife resources from CBM development as follows:

1. Prior to further CBM development in the Powder River RMP area, BLM will fund a wildlife study by a contractor chosen in consultation with the Tribe which: (a) fully assesses the likely impact of off-Reservation CBM development on the wildlife resources of the Northern Cheyenne Reservation; and (b) evaluates measures, such as establishing buffer zones and wildlife refuges to protect critical habitat, that will prevent and avoid significant impacts to Reservation wildlife resources.

2. Based on the findings of the wildlife study and in consultation with the Tribe, BLM will implement, in the form of additional RMP amendments, leasing stipulations, or operating plan conditions, all measures found necessary to fully protect Reservation wildlife resources from the impacts of off-Reservation CBM development.

F. Noxious Weeds.

Noxious weeds are already widespread on the Reservation and adversely affect the Tribe's ranching economy. The Tribe has adopted a noxious weed management plan that provides for control of noxious weeds through biological, chemical and integrated management techniques. Narrative Report at 6-64. The PFEIS acknowledges that CBM development can cause noxious weeds to spread as a result of soil disturbance through drilling and long-distance transport of weed species by drilling equipment and vehicles. PFEIS at 4-118. Although the spread of noxious weeds is addressed by various federal, state and local regulations and guidelines, these regulatory guidelines have not been effective in stopping the spread of noxious weeds. Id. at 4-122. Additional measures are therefore needed to protect the Reservation from the further spread of noxious weeds resulting from CBM development:

1. Operating plans will provide that vehicles and equipment associated with CBM exploration or development must be thoroughly washed to remove seeds before passing through the Reservation. This requirement should include all personnel including operators, construction workers, contractors, and researchers.

2. Operating plans will provide for mandatory training of all employees and contractors in noxious weed awareness and prevention. Extension offices and weed

districts provide free Noxious Weed Awareness and Education training. The early warning and identification of noxious weeds is critical to preventing their spread.

3. Operating plans and permits to drill will require use of common corridors and minimization of roads within the development area as provided in Alternative B to the DEIS to reduce the spread of noxious weeds in the region. All development roads will be restored to the original contours and re-vegetated with the appropriate native and/or hearty vegetation. At least two years of monitoring at the abandoned production field is required to ensure that noxious weeds have not invaded the area.

II. PREVENTION AND MITIGATION OF SOCIOECONOMIC IMPACTS.

A. Socioeconomic Impacts of Off-Reservation CBM Development.

In Northern Cheyenne Tribe v. Hodel, 12 Ind. L. Rep. at 3074, Judge Battin held that BLM violated the federal trust responsibility by selling coal leases in Montana without adequate consideration of the lease sale's cultural, social or economic effects on the Northern Cheyenne Tribe and the Reservation and the means necessary to mitigate such effects. A subsequent court-ordered SEIS, Economic, Social and Cultural Supplement to the Powder River I Regional EIS (June 1989, found that past energy development had caused adverse social, economic and cultural impacts on the Northern Cheyenne Reservation and that the proposed coal lease sale would result in additional severe cultural, social and economic impacts to the Tribe and the Reservation.

The Tribe's Narrative Report confirms that past regional energy development was accompanied by absolute and relative deterioration in socioeconomic conditions on the Northern Cheyenne Reservation. The wealth and income associated with the energy development did not extend to the Northern Cheyenne. Indeed, the opposite occurred. The Narrative Report documented all of the following:

- Although Tribal members have impressive educational attainments, those educational attainments have not generated the same incomes that non-Indians in the surrounding region receive for similar educational attainments. Narrative Report at 3-14 -3-18.
- This is largely attributed to the much more limited employment opportunities available to Tribal members. Unemployment rates among Tribal members are dramatically higher and those who are employed are under-employed relative to their educational levels. Id. at 3-16.
- The same is true as to other work-related skills and experience (construction, transportation, etc.). Id. at 3-18.
- Despite over 2,500 relatively high-paid energy jobs being created in the region since 1972 and over \$16 billion in regional mineral resources being removed, the percentage of employed Indian adults living on or near the Reservation has

declined, real median family income has declined, and the poverty rate has increased. Id. at 3-25 - 3-27.

The Narrative Report gave the following explanations for the inverse relationship between expanding off-Reservation energy development and Reservation economic conditions:

- Lack of access by the Northern Cheyenne to high-paid energy-related jobs. Narrative Report at 3-30;
- Limited commercial infrastructure on the Reservation to receive and make use of the expenditures associated with energy development. Id. at 3-30 - 3-34.
- Lack of Tribal access to energy revenues (bonuses, royalties, rents, taxes) to support public services and infrastructure on the Reservation. Id. at 3-34.

The barriers to the Tribe effectively sharing in the income and wealth associated with energy development are well known. Most Tribal members do not have the particular crafts skills to fill the higher-paid jobs associated with such development. Even those that do have those skills may be blocked from those jobs by overt or institutional racism. For these reasons, there will be no direct positive impacts of CBM development on the Reservation. The jobs will go to non-Indians, including outsiders migrating in from outside the region. This will put pressure on the Reservation and its resources while providing Tribal members none of the good jobs. The Reservation and Tribal members will be worse off. See Narrative Report at 3-27 -3-29.

The Northern Cheyenne do not own and operate businesses that could provide the goods and services that CBM companies, their workforce, and workforce families will need. The non-Indian owned businesses that could serve such markets do not operate on the Reservation. Nor is there is any other significant commercial infrastructure on the Reservation. As a result, these induced or secondary economic opportunities will also not stimulate the economy of the Reservation. There will be few indirect and induced positive impacts of CBM on the Reservation economy. See Narrative Report at 3-30 - 3-32.

Finally, the Narrative Report found that many public services, programs and facilities on the Reservation fall far short of needs and are inferior to those enjoyed by wealthier off-Reservation communities. The most serious inadequacies exist in housing, water, sewer, solid waste, and fire protection services. Serious deficiencies also exist in law enforcement, transportation and social services. Narrative Report at 1-5.

Full-scale CBM development in the vicinity of the Reservation would almost certainly place added stress on the Tribe's ability to provide basic services to the Reservation community. The *hope* of obtaining employment in the CBM boom will draw Tribal members back to the Reservation, increasing demands for water, sewer and solid waste services, exacerbating an already severe housing crisis, adding to the crime problem, and increasing the demand for Tribal social services. Increases in the numbers of non-Indians

passing through the Reservation will place added burdens on already substandard and underfunded Reservation law enforcement, fire protection and emergency medical services. The presence of non-Indians enjoying the wealth and income created by CBM will add to the level of social conflict, sense of deprivation and breakdown on the Reservation. Social and economic conditions on the Reservation will deteriorate as they did during the coal boom of the 1970s and early 1980s, while the rest of the region prospered. See Narrative Report at 3-9.

B. Goals and Objective of Socioeconomic Mitigation.

If the Northern Cheyenne are not to be further harmed by a new round of energy development, mitigation measures are needed that will substantially increase the likelihood that the Tribe will, at worst, be left in a neutral position. The proven threats to the Reservation from CBM development must be balanced by Tribal participation in the employment and revenue benefits flowing from CBM development.

Effective policies to mitigate these impacts should be targeted at achieving the following goals and objectives:

1. Assuring that a significant number of entry-level and skilled jobs associated with CBM development go to Tribal members. This will require both significant training programs and preferences in hiring for Tribal members.
2. Making financial resources available to the Tribal government to expand services to offset the increased pressure on the Reservation public services and facilities. Overall Reservation infrastructure should be strengthened. This, too, will provide employment opportunities for Tribal members.
3. Making resources available for the Tribe to monitor threats to the Reservation's cultural, physical, and environmental integrity so that the Tribe can respond quickly if the Reservation is threatened by CBM development. This too will provide training and employment opportunities for Tribal members.

Rather than being damaged by CBM development, it is possible for the Reservation to economically benefit from CBM development in the surrounding area if the development is carried out in an environmentally responsible fashion, its negative socioeconomic impacts on the Reservation are effectively mitigated, and the employment and revenue benefits of the development are extended to the Tribe and Tribal members.

In the broadest terms the Northern Cheyenne need employment opportunities for all Tribal members that provide both a decent income and ongoing skill development. Training programs such as apprenticeship programs that develop the craft skills that will be in demand for CBM development need to be set up. If these are run out of Dull Knife College with full counseling support they are more likely to be successful while also helping strengthen Reservation infrastructure. Programs that assure that participants in this training (and those already with the craft certification) will be hired are also crucial. This will

require preference arrangements or hiring incentives. Tribal coordination and ongoing support for these workers will be crucial for long-term success.

Success in developing and using these skills will lay a foundation for future skilled-labor jobs as well as self-employment opportunities that will allow Tribal members to develop entrepreneurial and business skills to participate in the secondary economic benefits that original CBM development will engender.

Expanded employment in providing basic social, educational, regulatory, and monitoring services will also provide training opportunities and experience within large organizations for Tribal members. These skills and experience are also likely to be valuable in the private sector, either working for private businesses or in starting new businesses.

Associated with the higher levels of employment and income will be expanded opportunities in all of the businesses that support the general population: retail trade and services. The higher level of income will create a larger set of niches for businesses on and close to the Reservation. This too will add to the range of employment and income opportunities.

Finally, funding should be provided to the Tribe to upgrade Reservation programs, services, facilities so that they can respond to the added demands placed upon them by off-Reservation CBM development. Other local jurisdictions in the CBM production area will receive substantial revenues from royalties and taxes with each increment of CBM production. They will use these revenues to defray the added cost of providing public services resulting from the population increases engendered by CBM development. Mechanisms need to be implemented which will allow the Tribe to receive its fair share of these governmental revenues which will enable the Tribe to upgrade its own services and facilities to meet the challenges imposed by a new energy boom in the region.

C. Specific Socioeconomic Mitigation Measures.

Set forth below are proposed mitigation measures addressing (1) employment opportunity, (2) contracting opportunity, (3) law and order and traffic issues, and (4) impact funding. Several mechanisms for implementing these measures may be available and should be explored. These include lease stipulations, permit conditions, operating plans, administrative royalty reductions (in the case of impact funding), and enactment of Federal and State legislation.

1. Employment Preference. The following will apply to all Federal and State CBM leases which include lands within 25 miles of the Reservation boundary:

a. Indians who live on or near the Northern Cheyenne Reservation and are qualified and available ("Qualified Indians") will be given preference in recruitment, training, hiring, promotion, and reductions in work force, in all categories of employment in operations on or near the leasehold.

b. The employment preference will be implemented under the terms of a separate written agreement between the Tribe and the lessee. Negotiation of this agreement will commence as promptly as possible and be conducted with diligence and good faith. To expedite the negotiation, the United States, State and Tribe will diligently and in good faith promptly concur on a Model Employment Agreement as a guide. Without limitation, the Model Employment Agreement and each Tribe-lessee agreement will include the terms and conditions set forth in i through vi below. Each Tribe-lessee agreement must be approved by the United States as to leases of federally-owned CBM, and the State as to leases of State or privately-owned CBM:

- i. Special programs for the recruitment of Qualified Indians.
- ii. Special programs for the training of Qualified Indians, including on-the-job training and training for advancement into supervisory positions.
- iii. Special workshops for other project work force to develop an awareness of Indian culture and concerns and an understanding of the need for and requirements of the employment preference.
- iv. Preservation of the lessee's authority to establish reasonable, even-handed and job-validated training programs, employment criteria, and work rules for all employees including Qualified Indians.
- v. Notification to all involved labor unions of the existence of the employment preference and of the lessee's duty and intent to abide by its terms.
- vi. A requirement that project contractors and subcontractors assume and comply with all terms and conditions of the employment preference in connection with their own project employment practices.

2. Contracting Preference. The following will apply to all Federal and State CBM leases which include lands within 25 miles of the Reservation boundary:

a. Businesses majority-owned and controlled by the Northern Cheyenne Tribe and/or its members ("Northern Cheyenne Contractors") will be given preference in the awarding of all contracts and subcontracts (i) for the conduct of operations on or near the leasehold, and (ii) for the procurement of material and equipment for such operations.

b. These preferences will be implemented under the terms of a separate written agreement between the Tribe and the lessee. Negotiation of this agreement will commence as promptly as possible and be conducted with diligence and good faith. To expedite the negotiation, the United States, State and Tribe will diligently and in good faith promptly concur on a Model Contracting Agreement as a guide. Without limitation, the Model Contracting Agreement and each Tribe-lessee agreement will include the terms and conditions set forth in i through iii below. Each Tribe-lessee agreement must be approved by the United States as to leases of federally-owned CBM, and the State as to leases of

State or privately-owned CBM:

- i. A fair and objective procedure under which a business entity applying for the status of Northern Cheyenne Contractor must be certified in the following two respects:
 - (1) as an entity actually majority-owned and controlled by the Tribe and/or a Tribal member; and
 - (2) as an entity capable of competently providing particular contract services or supplying particular material or equipment.
- ii. Advance notice to certified Northern Cheyenne Contractors of service or procurement contracts to be awarded for which they are qualified.
- iii. A requirement that project contractors and subcontractors assume and comply with all terms and conditions of these preferences in connection with their own project contracting and procurement practices.

3. Law and Order; Traffic. The Tribe is very concerned about law and order problems on the Reservation engendered by adjoining industrial development. Regional energy development has led to increased use of the Reservation – its roads, recreation areas, services and facilities – by non-Indian work force and their families. This has increased the incidence of criminal and traffic violations, thus impairing the safety and tranquility of the Reservation. Regional CBM development will bring further substantial population increases to the Reservation and the region as a whole, which will multiply these problems. The Tribe is uniquely vulnerable to the resulting threats to law and order because of the anomalous jurisdictional status of non-Indians on the Reservation. To mitigate this jurisdictional problem, the following will apply to all Federal and State CBM leases which include lands within Rosebud, Powder River and Bighorn Counties:

a. The lessee will obtain a covenant from each of its employees that while on the Reservation for any purpose, the employee will comply with all standards of conduct generally applicable to Tribal members.

b. Each lessee will obtain a covenant from each of its truckers that while operating on the Reservation, the trucker will comply with all laws, ordinances and rules applicable to the use of motor vehicles by Tribal members.

c. Each lessee will by contract require (i) each of its contractors and subcontractors to obtain like covenants from their employees and truckers, and (ii) each of its suppliers to obtain a like covenant from their truckers.

d. The above described duties imposed on employees and truckers will be enforced by each lessee, and its contractors, subcontractors and suppliers, by taking appropriate employee-related disciplinary action in the event such duties are violated.

e. These provisions will be implemented under the terms of a separate written agreement between the Tribe and each lessee. Negotiation of this agreement will commence as promptly as possible and be conducted with diligence and good faith. To expedite the negotiation, the United States, State and Tribe will diligently and in good faith promptly concur on a Model Law and Order/Traffic Agreement as a guide. Without limitation, the Model Law and Order/Traffic Agreement and each Tribe-lessee agreement will include the terms and conditions set forth in i through v below. Each Tribe-lessee agreement must be approved by the United States as to leases of federally-owned CBM, and the State as to leases of State or privately-owned CBM:

- i. Assumption in writing by each employee and trucker of the conditions set forth in a through d above.
- ii. Education of employees and truckers with respect to the standards of conduct they must observe while on the Reservation.
- iii. Appropriate employee-related disciplinary action for particular violations.
- iv. Resolution of disputes concerning the occurrence of violations.
- v. Notification to all involved labor unions of the existence of the written agreement and the lessee's duty and intent to abide by its terms.

4. Impact Funding. Regional CBM development will increase demands on already substandard, over-burdened and inadequate Reservation public services and facilities. Given the Reservation's central location in the region, it is especially vulnerable to these demands. However, as between the Tribe and its off-Reservation counterparts, there is a gross disparity in the availability of funds to satisfy these demands.

Off-Reservation, state and local governments can draw upon a variety of revenue sources to prepare for and meet the impacts of CBM development. In addition to traditional sources of revenue, such as real and personal property taxes and the sale of tax exempt bonds, these units of government will receive a significant portion of the revenues generated by CBM development. All of the State CBM lease revenues, and 50% of the federal lease bonuses, rentals and royalties, will accrue to the State. In addition, the State and local governments will receive an array of copious tax revenues engendered by CBM development. None of these revenue sources will be available to the Tribe, and the Tribe has no tax base of its own on which to draw.

To mitigate these inequities, the Tribe proposes the following impact funding program:

a. The Federal government returns 50% of all CBM lease bonuses, rentals and royalties to the State ("Off-Reservation Federal Impact Funds"). By Federal statute, these funds are to be used to mitigate socioeconomic impacts of CBM development on local communities. In the region, these impacts can be expected to occur in Big Horn, Rosebud

and Powder River Counties (the “Three County Area”), both on and off the Reservation. No portion of the Off-Reservation Federal Impact Funds will be made available to the Tribe.

b. The Tribe will be provided with a degree of proportionate funding. It should be recognized, however, that such funding will be substantially less than the total funding available to off-Reservation governments, since, as noted above, off-Reservation governments have many other CBM-related sources of funding not available to the Tribe.

c. The impact funding will be provided to the Tribe for the exclusive purpose of planning and providing public services and facilities on the Reservation.

d. The funding will be calculated by taking the amount of Off-Reservation Federal Impact Funds generated by all Federal CBM leases which lie in whole or in part in the Three County Area, dividing by the off-Reservation resident population of the Three County Area, and then multiplying by the resident population of the Reservation.

e. The funding will be provided to the Tribe at the same time that the Off-Reservation Federal Impact Funds are provided to the State.

f. There are several possible sources for the impact funding, including without limitation the following and combinations thereof:

- Entirely from the lessees, via lease stipulations, permit conditions or operating plans.
- From the lessees, but at no cost to the lessees, through exercise of the Secretary’s existing authority under 30 U.S.C. § 209 to grant royalty reductions to the lessees, accompanied by a commitment from the lessees to pay to the Tribe an amount equal to the royalty reductions.
- From the 50% share of the Federal lease bonuses, rents and royalties retained by the United States. Presumably, this will require Federal legislation.

III. PREVENTION AND MITIGATION OF IMPACTS TO NORTHERN CHEYENNE CULTURE AND CULTURAL RESOURCES.

Adverse effects to the Northern Cheyenne culture and cultural resources should be avoided wherever possible. Avoidance strategies recommended by the Tribe include:

A. Protection of Northern Cheyenne Homesteads.

As discussed in the Tribe’s Narrative Report, the early Northern Cheyenne homesteads east of the Tongue River have ongoing cultural and historical significance to

the Tribe. They are associated with a pivotal event in Northern Cheyenne history (establishment of the Tongue River Reservation). Further, they may be important due to their association with important individuals in Northern Cheyenne history. Many people living on the Reservation today are direct descendants of the original Tongue River homesteaders. Narrative Report at 7-21.

A buffer zone should be established around the Northern Cheyenne homestead sites in the Otter Creek and Hanging Woman drainages. Since current archaeological survey data is inadequate to identify all these sites, all sections where land records indicate Northern Cheyenne homesteading activity took place should be withheld from CBM exploration and development. These sections are identified in Appendix G to the Tribe's Narrative Report. Each homestead site still contains a sacred fireplace that needs to be purified so that the ancestors may continue on their journey. The sweat rocks need to be wiped off by Medicine people with sage and black cloth. The cloth needs to be taken to Bear Butte so that the people can go on with their lives. This is a necessary part of the healing process that will restore the Northern Cheyenne to balance in their lives and culture.

B. Protection of Significant Hunting, Fishing and Plant Gathering Areas in Tongue River Valley.

As discussed in the Tribe's Narrative Report, the Northern Cheyenne value the Tongue River valley because of the vegetation and wildlife it sustains. About 57% of Birney residents and 84% of Ashland residents supplement their income by hunting, fishing and gathering wild plants and herbs. These subsistence sources remain important today. Edible plants collected along the Tongue River are listed on page 7-27 and in Appendix F of the Narrative Report. Plants of the Tongue River region are also valued by the Northern Cheyenne for their medicinal properties and are also listed on page 7-27 and Appendix F of the Narrative Report. Plants in the Tongue River valley such as cottonwood trees also have spiritual significance to the Northern Cheyenne. Big Medicine, a rare and important medicinal root, is collected along the east side of the Tongue River, as well as along Poker Jim Creek. Increasing the ease of access to the medicinal plants across from Birney and in the Poker Jim area has been a major concern for the Tribe. Narrative Report at 7-21 - 7-27.

The 14-mile buffer zone proposed by the Tribe to protect Reservation groundwater resources should be adequate to protect culturally significant plant gathering areas within the Tongue River valley. However, if CBM development is authorized within the buffer zone the following protocols should be followed:

1. No development will be permitted up to five miles east of the Tongue River between Ashland and Birney without mitigation measures designed to avoid disturbance of important hunting, fishing and plant gathering sites.

2. BLM operating plans will require that prior to development in areas within five miles of the Tongue River between Ashland and Birney, the project proponent and BLM will consult with the Northern Cheyenne Cultural Commission to determine the location of any important hunting, fishing and plant gathering sites. The BLM in consultation with the Tribe's Cultural Commission will design measures to avoid disturbance of these important areas.
3. No permits to drill will be issued within three miles of Poker Jim Butte to protect important medicinal and ceremonial plant gathering area in that location.
4. BLM will monitor the effects to the Northern Cheyenne subsistence economy from CBM development by funding annual updates to the Tribe's subsistence survey (NCT 2002). A Wildlife Technical Working Group, whose membership will include Northern Cheyenne and agency wildlife specialists, will routinely review the subsistence data of each year. On the basis of this data they should recommend changes in leasing stipulations to curtail any noted deleterious effects to Northern Cheyenne subsistence hunting, fishing and plant gathering. This group will also review all reclamation plans to ensure that habitat diversity around the Reservation is maintained and plants with traditional cultural uses are included in the revegetation seed mixes.

C. Protection of Culturally Important Springs.

The Northern Cheyenne believe that springs, rivers, swamps and groundwater are living beings with spirits. According to the 2001 Northern Cheyenne Reservation Survey on Traditional Economy and Subsistence, over 97% of the people believe that springs have spiritual value. The Northern Cheyenne communicate with these spirits. The ongoing traditional cultural importance of these water locations can be seen in the respect shown to these location and in the offerings made at these locations. Narrative Report at 7-12. Failure to protect culturally important springs, both on and off the Reservation, will constitute an irretrievable and irreversible cultural and spiritual impact to the Northern Cheyenne Tribe.

The following efforts should be made to avoid damage to off-Reservation springs which have cultural significance to the Tribe.

1. The BLM will inventory springs off the Reservation within the 14-mile buffer zone. This will include locating springs by GPS, determining the source of the water, measuring the flow, monitoring water quality parameters, and documenting vegetation growth and condition with photos and video. A comprehensive spring inventory should be conducted at least twice per year.

2. If development is allowed within the 14-mile buffer, no permits to drill will be issued within three miles of an inventoried spring, prior to consultation with the Northern Cheyenne Cultural Commission regarding the cultural significance of the spring to the Tribe.
3. Springs that are identified by the Cultural Commission as having special significance to the Northern Cheyenne will be protected by a buffer zone adequate to protect medicinal and ceremonial plants as well as the spiritual beings that inhabit the springs and maintain the current conditions which facilitate traditional cultural use of the springs for prayer, offerings and ceremonies. The size and shape of the buffer zone will be determined by BLM, in consultation with the Tribe based on the best available hydrological data.
4. Where drilling is allowed within 3 miles of a culturally important spring, BLM will monitor the drawdown of aquifers related to the spring on a systematically scheduled basis and provide timely reports of the monitoring data to the Tribe. The Northern Cheyenne Tribe will be full participants in a Technical Working Group that oversees the monitoring. (It could be most cost efficient to have the Northern Cheyenne collect this data and distribute it to all interested parties).
5. In keeping with the best adaptive management practices, the BLM will halt pumping CBM production around culturally important springs if monitoring data indicates that dewatering of the spring is occurring or imminent.

D. Protection of Grave Sites.

All graves are accorded respect by the Northern Cheyenne. No grave should be disturbed. People visit graves to pray and make offerings. Traditionally, the Northern Cheyenne view death as a process rather than an event. Death marks the separation of the spirit from the body, but the spirit/person remains a part of the Cheyenne community. Consequently, the respect shown to graves is part of the respect shown to spiritual beings. Narrative Report at 7-17.

To protect grave sites, BLM should not issue permits to drill within a mile of all Tribal burials, graves, or cemeteries (regardless of temporal or Tribal affiliation). The Tribe supports all people's right to rest in peace.

E. Prevention and Mitigation of Impacts to Northern Cheyenne Cultural Resources.

1. BLM will support (by providing funding, training, and in kind services) the creation of a Tribal Historical Preservation Office (THPO). The THPO will focus on Tribal culture, history, geography and related research, and on building a Northern Cheyenne

Archive. The THPO will be a clearinghouse for cultural resource information and the development of a public outreach program and education program for all grade levels in local schools. The education component is a necessary part of the healing process required to bring the Cheyenne back into balance. Showing the young people their place and interconnection to the region's landscape will help lessen the effects of cultural amnesia created by the historical institutional denigration of Cheyenne culture.

2. Mechanisms will be established to enable the Tribe to monitor of all site-specific cultural resource work done for CBM development. Monitoring will ensure that all Tribally affiliated properties are recorded and evaluated in a culturally appropriate fashion. This should include, but not necessarily be limited to, the respectful treatment of human remains, items of cultural patrimony and materials relating to ongoing traditional cultural uses of sites (e.g., offering cloths etc.).

3. All Tribally affiliated properties will be evaluated under the National Historic Preservation Act in accordance with NPS Bulletins 15, 16 and 38. Bulletin 38 evaluations must include face to face contacts with Northern Cheyenne cultural resource specialists, culture historians and/or culture committee members. Evaluations will include specific discussions of Cheyenne history and culture as well as scientific values.

4. Cultural resource contractors hired by the BLM or project proponents and BLM archaeologists will demonstrate good faith consultation with the Tribe and make every attempt to include Cheyenne cultural resource specialists in all aspects of their work.

5. Cultural resource technical reports approved by the BLM will follow current best practice standards and be accompanied by public narratives suitable for use in Northern Cheyenne schools.

6. Treatment plans for historic properties (eligible sites) will always give the highest priority to avoidance when the property is eligible as a Traditional Cultural Property (under Bulletin 38). If a site is eligible only for its scientific value, mitigation through data recovery may be considered if the site can not be avoided. Training opportunities for the Cheyenne in archaeological excavation techniques and/or public awareness programs for Northern Cheyenne students will accompany any excavation of tribally affiliated sites.

7. All well locations and ancillary facilities (roads, pipelines etc.) that cause ground disturbance will be intensively inventoried for cultural resources. Cultural resources include archaeological sites, plant collecting areas, paint sources, baculite sources and earthlodges (sacred hills) and bird habitats, e.g., nesting area of birds who participate in Northern Cheyenne ceremonial life. This will require Northern Cheyenne participation in the survey effort to identify paint, plant and earthlodge sites.

8. Since CBM development, if permitted, could cause a cumulatively significant amount of ground disturbance, the various site-specific reports should be compiled and the data synthesized into an over-riding and undatable technical document at the end of each

field season. In keeping with modern adaptive management strategies, this synthesis will be reviewed by a Cultural Resources Technical Working Group (CRTWG) which should include Northern Cheyenne culture historians/elders and/or Tribal Historical Preservation officers designated by the Tribe along with agency cultural resource specialists. This will enable the CRTWG to review the requirements for site inventory, testing, evaluation and treatment. The synthesis of this data could lead to streamlining or expanding cultural resource work as the data directs.

9. A \$300 filing fee will be included in the cultural resource contracts. This filing fee will be allocated to the Northern Cheyenne Tribe for the development and support of the THPO. It will support the maintenance of site and report records as well as help defer the costs of Tribal cultural resource review.