CHAPTER 2
ALTERNATIVES INCLUDING THE PROPOSED ACTION

2.0 INTRODUCTION

This Chapter describes the alternatives developed to address the issues, presents a comparison of the alternative features and a summary of the effects that would result from implementing each alternative. Section 2.2 presents these alternatives in detail.

2.1 DEVELOPMENT OF ALTERNATIVES

Alternatives present different management options in response to the purpose and need for the Proposed Action and address the relevant issues related to the Proposed Action. The effects analysis (Chapter 4) then describes the known or potential effects that would result if the alternatives were implemented.

Alternative A, the No Action Alternative, represents a continuation of the existing situation which includes the state and private wells and associated infrastructure of the Dry Creek POD. The state and private wells included in the POD have been drilled and the associated infrastructure has been installed. The federal wells and associated infrastructure would not be drilled, completed or constructed in the project area. Alternative B, the Preferred Alternative, consists of Fidelity's complete POD with additional mitigation measures developed by BLM. A comparison of the Alternatives is found in section 2.6.

BLM would also process existing unauthorized facilities found in the project area, in both alternatives. These facilities include an access road and buried gas and water pipelines which were inadvertently constructed on BLM surface four years ago. These unauthorized facilities were discovered during review of Fidelity's Dry Creek POD. The unauthorized use case for these facilities has been processed and closed. Under Alternative A, BLM would authorize these existing facilities with a right-of-way grant. Alternative B would carry forward the same authorization as found in Alternative A, but would also authorize the new, proposed "off-lease" facilities on Federal surface.

2.1.1 Alternatives considered but eliminated from Detailed Analysis

Injection of Produced Water

In this suggested alternative, produced CBNG water would be injected either into depleted coal seams or sandstone formations capable of receiving produced water. This alternative would reduce the amount of produced water available for beneficial use or requiring surface disposal. The preferred water management option of water produced with CBNG is for beneficial use.

This alternative was suggested as a means to reduce the amount of water requiring treatment or surface disposal. The projected volumes of produced water from the project can be discharged directly into the Tongue River under Fidelity's MPDES permit or used for beneficial purposes; such as livestock and Spring Creek Mine use. The analysis in this EA shows no unresolved conflicts concerning the management of produced water; therefore, an analysis of a water injection alternative is not necessary to address water quality issues.

Water Treatment Alternative

This suggested method of managing produced water would require all produced water to be "treated" so that the water quality of receiving waters, soils and vegetation and existing beneficial uses would be protected. The quality of produced water varies from one coal to another and even geographically within a coal. The end use of the produced water and the authorizing permit determine the need for "treatment." The projected volumes of produced water from the project can be discharged directly into the Tongue River under Fidelity's MPDES permit or used for beneficial purposes. The analysis in this EA shows no unresolved conflicts concerning the management of produced water; therefore, an analysis of a separate water treatment alternative is not necessary to address water quality issues.

2.2 DESCRIPTION OF THE ALTERNATIVES

2.2.1 Alternative A—No Action

There would be no BLM approved Dry Creek POD actions and none of the federal wells in the Dry Creek POD would be drilled, completed and produced; nor would any of the associated production infrastructures that required BLM approval be installed or constructed in the project area. This alternative would reflect the current state, fee and federal production and infrastructure of the CX Field, in which the Dry Creek project is proposed. The recently approved and constructed State and Fee wells, within the Dry Creek POD, have been included in this alternative to demonstrate the project area without any additional federal wells or federal infrastructure constructed.

A right-of-way would be required for 12 existing

buried four-inch poly gas lines in the NE¼NW¼, Section 19, T. 9 S., R. 40 E., and for three buried four-inch poly gas lines, one buried three-inch poly water line, and an access road, which are existing, in the NW¼SE¼, Section 13, T. 9 S., R. 39 E. The portion of the right-of-way in Section 19 would be 1,600 feet long and 50 feet wide, consisting of 1.83 acres and the portion in Section 13 would be 300 feet long, 50 feet wide and consist of .34 acres, for a total length of 1,900 feet and a total of 2.17 acres, more or less. These facilities were inadvertently constructed on BLM surface about 4 years ago and discovered during the review of Fidelity's Dry Creek POD. The unauthorized use case for the above unauthorized facilities has been processed, unauthorized fees collected, and the casefile closed. These existing facilities would be authorized by a BLM issued right-of-way under this alternative.

2.2.2 Alternative B—Proposed Action, with Additional Mitigation: ***Agency's Preferred Alternative***

Fidelity's proposed Dry Creek Plan of Development (POD), which includes Master Drilling and Surface Use Plans, a Water Management Plan, a Cultural Resource Inventory Plan, a Wildlife Monitoring and Protection Plan, and other supporting information, is the proposed action alternative. The POD describes the project and best management practices designed to implement the project. The analysis of the Proposed Action includes all the wells and infrastructure associated with the proposed federal wells (24 new and 1 existing) (see Appendix A) in the Dry Creek project area. The only authorization that would be issued by BLM under this Alternative would be for the federal wells and facilities on federal leases for the development and production of such federal wells.

The Dry Creek POD has been modified from its original submittal to meet natural resource requirements identified by BLM. The original POD was modified as a result of the interdisciplinary review and field visits. During field "on-site" visits, each of the proposed federal locations and areas of proposed surface disturbance were inspected to ensure that potential impacts to natural resources would be minimized. The specific changes identified for these areas were as follows:

-The access road through Sections 13, 18 and 19 required an engineering design to reduce surface disturbance

-Two-track access to location 24C-2399 was modified to lessen the length

-The two wells on location 44C,M-1399 were dropped due to difficulty of access and potential disturbance to the rangeland

- The well configuration on 44C,M,D-2699 was modified to reduce surface disturbance

-Various corridors were relocated to existing two tracks to minimize disturbance

- Unauthorized "off-lease" facilities located on two tracts of Federal surface, were identified and inventoried

The Proposed Action includes the drilling, completing and producing of 24 federal wells, completing and producing 1 previously drilled federal well (42D-1599), and constructing and installing the associated infrastructure of access roads, flowlines, power lines, reclaiming disturbed areas and the use of existing meter and compressor facilities, produced water outfalls. A right-of-way would be required for any "off-lease" facilities on Federal surface. Fidelity proposes to begin these operations after receipt of necessary approvals with completion of these operations in two years. The average production life of the project wells is expected to be 10-20 years with final reclamation to be completed two to three years after plugging of the wells. Components of the proposed project are listed in Chapter 2, Table 2.5-1.

Drilling

Twenty four (24) CBNG wells would be drilled on eleven (11) well sites (see Appendix A), with 1 to 3 wells drilled on each well site at 160 acre spacing (four wells per coal seam per 160 acres). Separate vertical wells would be drilled into the Carney, Monarch and Dietz coal seams. In some areas, the Dietz splits into as many as three zones. Anticipated depth of the wells would be from approximately 300 to 800 feet deep. The drilling period is anticipated to last approximately two months.

Wells would be drilled by truck-mounted water well-type drilling rigs. The wells would be drilled using air and water for circulation and supplemented as needed by bentonite and sawdust or wood chips. Steel casing would be cemented in place from ground surface to the top of the target coal seam. The casing would be sized to accommodate a downhole pump to lift water, but would typically be seven inches in diameter. The well would then be drilled to the base of the target coal seam and under reamed to increase the exposed coal surface for production. Fresh water, including coal seam water, would be used in the drilling operations. CBNG production would occur by pumping groundwater from the coal seams, thereby reducing hydrostatic pressure and causing the

methane to become desorbed from the coal surface and flow to the wells. All wells capable of commercial production would be completed and produced and the associated infrastructure would be constructed and installed.

At each site, drilling wastes including cuttings, water and drilling muds would be placed in two pits. Each pit would be approximately 6-feet wide, by 15-feet long, by 15-feet deep and fenced with a wire fence to keep out livestock and wildlife. After conclusion of drilling operations, fluids in the pits would be removed and either used for other drilling operations or disposed of properly and the pits backfilled after the remaining muds have dried. Wastes accumulated during drilling and completion operations would be contained on the well site and disposed at the Sheridan sanitary landfill. Chemical "porta-potties" would be located at active construction, drilling and battery sites.

Access

Vehicles would access the well sites by existing bladed roads, two track trails or across undisturbed rangeland along a designated route. Pipeline corridors would also be used as temporary roads for access to well sites. Culverts would be installed at drainage crossings, if needed. Gravel or scoria needed for surfacing material would come from a pit owned and operated by Fidelity and permitted by MDEQ.

The road and pipeline routes are proposed as agreed to by the appropriate private surface owner. A right-of-way would be required for any "off-lease" facilities on Federal surface. Where possible, whether proposed two-track road or existing, the roads would serve as a common corridor for the gas, electric, or water. The project map (1.3-2) shows the project boundary, existing and proposed wells, access roads, pipelines (water and gas), power lines, and the existing central gathering/metering/water processing facilities in the project area.

Well Sites

The 24 federal wells would be located at 11 sites with 1 to 3 wells drilled at each site; and one previously drilled federal well (42D-1599) in the Dietz formation. Two of the proposed federal well sites are located on surface and minerals owned by the federal government, under the BLM's jurisdiction, and nine of the proposed federal well sites and the one existing federal well are located on privately owned surface and federally owned minerals. Approximately 1 acre at each well site would be disturbed by vehicle traffic, drilling and completion operations, reserve pits and temporary storage of equipment. Most of the well sites would not require construction of a well pad. If construction is needed, it would consist of blading a level area for the drill rig.

Surface facilities at each producing well would consist of a wellhead and an insulated, fiberglass well head cover (approximately 5-feet square by 4-feet tall) and an electrical panel all enclosed in a three rail welded fence. The cover would be painted a color to blend with the surrounding area. The area within the fence would be graveled while the area outside the fence would be reclaimed after installation of production equipment. The existing CX Field compressor sites (CX24 Battery (MAQP #3036), CX25 Battery (MAQP #3037), CX19 Battery (MAQP #3118), CX35 Battery (MAQP #3122), and CX14 Battery (MAQP #3141)), the existing sales battery (Symons Central Compressor Station (MAQP #3250-00)), and water management facilities would be utilized by this proposal.

Power Lines

Electricity would be provided to each battery site by a buried cable or an aerial line. Overhead electricity would be brought into the Project area by existing lines from the north and south, with an additional .5 miles of aerial line constructed near the CX Ranch, running through sections 13 and 18. Overhead power lines would be constructed according to APLIC (Avian Power Line Interaction Committee-1996) guidelines. Approximately 6 miles of buried electrical cables would tie into the aerial power lines at a service tap which typically would serve up to three wells. Buried power lines would be installed parallel to an access road or following the most direct route (0.5 miles of buried cable) from a power pole to the well site.

Flowlines

A plastic flowline to carry gas would be buried from each well to a battery site. Approximately 5.5 miles of this line would be combined with water flowlines in the same trench. One plastic flowline would be buried to carry produced water from all wells at the well site to the discharge point. When feasible, flowline routes would parallel and be located adjacent to existing or proposed roads and trails to the battery or water storage/discharge point. Areas disturbed for flowline installation would be reclaimed.

Produced Water

Water produced with CBNG would be made available for beneficial uses or discharged into the Tongue River in accordance with Fidelity's existing

MPDES permit (MT0030457). Produced water would be transported through buried plastic flowlines from each well site to the following existing facilities: (a) 2 discharge points (outfalls) along the Tongue River, (b) Spring Creek Coal Mine use for mine operations, (c) one existing off-channel impoundment, and (d) 3 stock watering tanks.

The discharge points into the Tongue River are located near the main channel in areas with low channel gradients. Each outfall structure consists of a riprap pad surrounding the discharge pipe with a narrow riprap lined trench sloping into the channel area to prevent eroding the channel bank.

Fidelity is currently discharging water produced by private CBNG wells to the off-channel impoundment, as necessary to satisfy landowner stock watering needs. The Dry Creek POD proposes to receive federally produced water in the impoundment. The impoundment is located in a small topographically enclosed basin underlain by low-permeability clay materials. The impoundment is entirely located on private land, private mineral lease. BLM approval is required in accordance with Federal Onshore Oil and Gas Order No. 7. Fidelity has submitted an MBOGC approved Application For Permit To Construct Or Operate An Earthen Pit Or Pond, dated April 3, 2001.

Battery Sites

Gas from the new wells would be transported from each well to existing field battery sites. The battery sites are the CX 14, CX 19, CX 24, CX 25 and CX 35.

Right-of-way

A right-of-way would be required for 12 existing buried four-inch poly gas lines in the NE¼NW¼, Section 19, T. 9 S., R. 40 E., and for three buried four-inch poly gas lines, one buried three-inch poly water line, and an access road, which are existing, in the NW¼SE¼, Section 13, T. 9 S., R. 39 E. The portion of the right-of-way in Section 19 would be 1,600 feet long and 50 feet wide, consisting of 1.83 acres and the portion in Section 13 would be 300 feet long, 50 feet wide and consist of .34 acres, for a total length of 1,900 feet and a total of 2.17 acres, more or less. These facilities were inadvertently constructed on BLM surface about 4 years ago and discovered during the review of Fidelity's Dry Creek POD. The unauthorized use case for the above unauthorized facilities has been processed, unauthorized fees collected, and the casefile closed with the issuance of a right-ofway. These existing facilities would be authorized by a BLM issued right-of-way under this alternative.

The BLM issued right-of-way would also authorize the following facilities on Federal surface within the project area:

> One proposed buried four-inch poly gas line, one proposed buried three-inch poly water line, a .48 kV, 3-phase buried powerline, and an existing two-track access road in the NE¼NW¼, Section 26, T. 9 S., R. 39 E.; this portion of the right-of-way for the gas and water line, buried powerline, and access road would be 1,300 feet long and 50 feet wide, consisting of 1.49 acres;
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> Two proposed buried four-inch poly gas lines, one proposed buried three-inch poly water line, a .48 kV, 3-phase buried powerline, and an existing access road which will be improved to an all weather Resource road in Lot 2, Section 18, T. 9 S., R. 40 E.; this portion of the right-of-way would be 640 feet long and 50 feet wide, consisting of .74 acres;
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> Fifteen proposed buried four-inch poly gas lines and an existing access road which will be improved to an all weather Resource road in the NE¼NW¼, Section 19, T. 9 S., R. 40 E.; this portion of the right-of-way would be 1,400 feet long and 50 feet wide, consisting of 1.61 acres; a portion of this gas line and access road right-of-way would be located in the same right-of-way area as the existing gas line right-of-way, therefore, the total length of the right-of-way in this tract would be 2,500 feet, 50 feet wide, and would consist of a total of 2.87 acres.

The right-of-way would be issued to Fidelity E & P Co. for buried four-inch poly gas lines, buried three-inch poly water lines, buried .48 kV, 3-phase powerlines, and access roads would be a total of 4,740 feet long and 50 feet wide, consisting of 5.44 acres, more or less. Approximately 2,040 feet of existing road would be upgraded to all weather conditions. This upgrade would include gravel or scoria surfacing material from a pit owned and operated by Fidelity and permitted by MDEQ. There would be no temporary work areas required.

The gas and water lines, buried power lines and access roads would be constructed, installed, and reclaimed as described in the Master Surface Use Plan and Reclamation Plan in Fidelity's Dry Creek Plan of Development (POD). The gas and water lines would be located in one 22 to 36 inch wide, five-foot

deep trench. The buried powerline would be plowed in 24 inches deep alongside and 10 feet from the pipeline trench.

Reclamation

Reclamation would occur in areas where surface disturbing activities have been completed or concurrently while other operations are occurring in the project area. Reclamation activities would be conducted in accordance with agency requirements and surface owner agreements. Typically, disturbed areas not needed for production operations would be recontoured to resemble the surrounding terrain, stored topsoil would be spread over the recontoured area, necessary erosion control measures would be installed, disturbed areas would be seeded with a certified weed-seed free mix agreed upon with the surface owner and reclamation work would be completed within 1 year after a specific activity has been completed. Final reclamation would be completed approximately 2 to 3 years following the end of gas production.

A detailed description of design features, construction practices and water management strategies associated with the proposed action, can be found in the Master Surface Use Plan, Drilling Plan and Water Management Plan in the POD and individual APDs.

Additional Mitigating Measures

The following additional mitigating measures are part of Alternative B and would be included as conditions of approval with approved permits, if this alternative were selected (see Appendix F for the entire, Alternative B Additional Mitigating Measures). These mitigating measures would apply to the federal wells, facilities on federal leases for the development and production of such federal wells and facilities completed solely for the development and production of federal wells. As a result of inspections or monitoring, BLM can impose necessary mitigation measures that were not previously identified or rescind mitigation measures that are not necessary.

1. The operator shall notify BLM (406-232-7001) at least 48 hours before beginning construction activities associated with the sites listed below. BLM shall immediately notify the Northern Cheyenne Tribe about construction activities. The company shall have its consulting archaeologist or an archaeologist holding a valid BLM Cultural Resources Permit at the sites listed below during construction. The operator shall provide the opportunity to the Northern Cheyenne Tribe for a qualified cultural resources specialist to monitor construction in the locations listed below for the Federal portion of the Dry Creek Coal Bed Natural Gas Plan of Development (POD) Area. The results of monitoring shall be reported in writing by the Consulting Archaeologist and Tribe to BLM within 14 days after completion of monitoring activities.

   The purpose of the monitoring is to identify any cultural resources that may be discovered by construction activities. The archaeologist or cultural resources specialist may temporarily halt construction within 300 feet (100 meters) of the find until it can be evaluated by a BLM Cultural Resources Specialist. The operator shall immediately notify BLM (406-232-7001) upon the discovery of cultural resources. The BLM authorized officer shall respond to the operator within the five working days as per Condition of Approval No. 5. The same conditions in Condition of Approval No. 5 would apply for buried cultural resources encountered during monitoring.

   CORRIDOR PLACEMENT
   The utility corridor between Wells 42 C, M-1399 and Wells 12D, M, C-1990 in sections 12, 18 and 19 shall be located within the bladed profile on the north/east side of the road.

   MONITORING REQUIREMENTS:
   Monitor trenching and blading operations at:

   - The utility corridor between Wells 42 C, M-1399 and Wells 12D, M, C-1990 in sections 12, 18 and 19.
   - The utility corridor between Well 22C, M-2399 and the battery site in section 24.
   - The utility corridor between Wells 32M, C-1599, 43M, C-1599 and the battery site in section 14.
   - A 2 acre area centered around Well 24C-2399.

2. Construction and drilling timing

stipulation for sage grouse: No construction from March 1 to June 15 in grouse nesting habitat within two miles of an active lek for the following wells: 32 M,C-1599; 43 M,C-1599; 22 M,C,-2399; 43 M,C-2399; 24 C-2399; 41 C,D-2699; 24 C,D-2699 and 42 D-1599, unless BLM grants an exception (see Appendix H).

3. Construction and drilling timing stipulation for mule deer winter range: All of the federal wells proposed within the Dry creek POD would be located within identified mule deer winter range. Construction and drilling activities are prohibited from December 1 to March 31, unless BLM grants an exception (see Appendix H).

4. Construction and drilling timing stipulation for raptor nests active within the past two years: Construction and drilling activities are prohibited within 0.5 miles of a nest from March 1 to August 1, on the following wells: 12D,M,C-1990, unless BLM grants an exception (see Appendix H).

2.3 RELEVANT CUMULATIVE ACTIONS

The MT FEIS analyzed long-term cumulative effects of CBNG activity throughout the region and disclosed the general types of effects to be considered in more detail during the review of site-specific CBNG proposals such as the Fidelity's Dry Creek POD. Cumulative effects are the result of impacts from other past, present, or reasonably foreseeable future actions that would overlap in time and locale with the direct effects of the proposed action or alternatives, thus resulting in "cumulative effects" distinctly different (greater or less) than the direct effects. The actions listed below have been considered as potential contributors (relevant) to cumulative effects with the proposed project. A specific cumulative effects analysis for each resource is presented in Chapter 4 by alternative.

2.3.1 Relevant Past Actions

Coal Mines

- The *Decker Mine* is a surface coal mine owned jointly by the Kiewit Company and Kennecott Energy Company and operated by Decker Coal Company, a Kiewit subsidiary. The East Decker Mine is located approximately three miles east of the Dry Creek project area. The mining method consists of open pit strip mining. Overburden and interburden are removed by draglines, shovels and trucks, front-end loaders and trucks or dozers. The permitted mine operations area is approximately 11,400 surface acres. The average annual coal production is 10 million short tons. The activities of the Decker Coal Mine, as well as its location in proximity to the Dry Creek POD, may cause cumulative effects to wildlife, water, air, cultural and aquatic resources. See Chapter 4, Environmental Consequences, for cumulative effects relating to each resource.

- The *Spring Creek Mine* is a surface coal mine owned and operated by Spring Creek Coal Company. The mine is located approximately five miles north of the Dry Creek project area. The mining method consists of open pit strip mining. Overburden and interburden are removed by draglines, shovels and trucks, front-end loaders and trucks or dozers. The permitted mine operations area is approximately 7,000 surface acres. The average annual coal production is 11 million short tons. The activities of the Spring Creek Coal Mine, as well as its location in proximity to the Dry Creek project, may cause cumulative effects to wildlife, air, and cultural resources. See Chapter 4, Environmental Consequences, for cumulative effects relating to each resource.

- The *Absaloka Mine* is a surface coal mine located on the Crow Reservation, owned and operated by Westmoreland Resources. The mine is located approximately forty miles northwest of the Dry Creek POD area. The mining method consists of open pit strip mining. Overburden and interburden are removed by draglines, shovels and trucks, front-end loaders and trucks or dozers. The permitted mine operations area is approximately 5,500 surface acres. The average annual coal production is 6.8-8 million short tons. The scope and nature of the Absaloka Coal Mine, as well as its location in proximity to the Dry Creek project area, may cause cumulative effects to air and migratory wildlife.

2.3.2 Relevant Present Actions

Gravel/Scoria Pits

Some gravel or scoria would be used to surface project area roads and would come from already permitted mineral material sites. Surface disturbance associated with gravel or scoria mining would not exceed existing permit limits. The activities associated with the gravel and scoria pits, as well as their locations in proximity to the Dry Creek project

area, may cause cumulative effects to other resources. See Chapter 4, Environmental Consequences, for cumulative effects relating to each resource.

CBNG Development

According to the Montana Board of Oil and Gas Conservation website, June 29, 2004, approximately 495 CBNG wells have been drilled in Big Horn County; approximately 98 wells or less than 20% are Federal wells. Status of these wells includes drilling, shut-in, producing and plugged. Currently 456 CBNG wells, all in Big Horn County, are considered to be in production. This development is found in the CX Field, near Decker, Montana.

- *Montana*: The CX Field, including Badger Hills area, is a CBNG producing field operated by Fidelity Exploration & Production Company. The field encompasses approximately 56 sections between the Montana/Wyoming state line and the Decker and Spring Creek coal mines. As of November 18, 2004, MBOGC website demonstrates the CX Field has 456 producing wells, 3 being drilled and 16 shut in. The existing CBNG producing wells are located adjacent to the Dry Creek project area. The CBNG wells in the CX Field are finished in the Dietz 1, Dietz 2, Dietz 3, Monarch and Carney coal seams. The activities of the CX Field and its location in proximity to the Dry Creek project area may cause potential cumulative effects to wildlife, ground and surface water, air, cultural, mineral, vegetation and aquatic resources. See Chapter 4, Environmental Consequences, for cumulative effects relating to each resource.

- *Powder River Gas (Coal Creek Project):* Powder River Gas Company received approval from BLM and MBOGC to drill and test 16 CBNG wells on November 19, 2004. This project area is approximately 6 miles northeast of the Dry Creek POD area. Powder River Gas has begun to drill 8 federal wells (on 4 well sites) and 8 private wells (on 4 well sites). Upon successful completion of testing, Powder River Gas may propose a POD facility location. The activities of the Powder River Gas-Coal Creek project, as well as its proposed location in proximity to the Dry Creek project, may cause cumulative effects to wildlife, ground and surface water, air, cultural, mineral, vegetation and aquatic resources. See Chapter 4, Environmental Consequences, for cumulative effects relating to each resource.

- *Wyoming*: According to the WBOGC from 2002 to 2004, the Upper Tongue River Basin has been predicted to cumulatively have 1,474 wells drilled and 48,241 acre feet of produced water (2002, 2003 and 2004, January to May, is actual data and 2004 from May on, is predicted). The cumulative water production is only 42.8% of the predicted amount (actual 20,626 acre feet compared to predicted 48,241 acres feet).

  The BLM's Buffalo Field Office has received six CBNG PODs. The Lower Prairie Dog and Tongue River PODs have been approved and are in various stages or completion/production. The others are currently being processed. These include the following:

Table 2.3.2-1 – Recent Wyoming BLM PODs

POD Name	Operator	Sections	T N /R W	CBNG Wells	Water Management Plan
Lower Prairie Dog	J.M. Huber	4,8,9 &10	57 / 83	23 Approved	Containment and LAD
Tongue River	Fidelity	19, 24, 25, 30	58 / 83	23 Approved	Containment and LAD
Little Badger	J.M. Huber	25, 30, 31	58 / 82	30 Pending	Containment, LAD and Injection
Brinkerhoff	Pennaco	5, 6, 7, 8, 17, 18, 20, 21 & 28 12, 13 &24	57 / 82 57 / 83	27 Pending	Containment and LAD
Antelope Draw	Nance Petroleum	19, 20, 21, 28, 29, 31, 32, & 33	58 / 79	31 Pending	Containment
West Antelope Draw	Nance Petroleum	22, 23, 24, 25, 26, & 27	58 / 80	21 Pending	Containment

The scope and nature of the Wyoming CBNG, as well as the locations in proximity to the Dry Creek POD, potential cumulative effects are likely to occur to air, cultural, wildlife and water resources. See Chapter 4, Environmental Consequences, for cumulative effects relating to each resource.

2.3.3 Relevant Reasonably Foreseeable Actions

The BLM 1985 Powder River RMP/EIS as amended by the MT FEIS contains Reasonably Foreseeable Development and Reasonable Foreseeable Future Actions scenarios. The scenarios prepared for the amendment estimated that approximately 26,000 federal CBNG wells would be drilled throughout the life of the plan (page MIN-29). The 24 proposed wells analyzed in this document are part of the 26,000 wells predicted in the MT FEIS.

The MT FEIS predicts that an additional 200 conventional oil and gas wells would be drilled in Big Horn County in the next 20 years.

Future CBNG drill sites would most likely be in proximity to established production, or would offset dry holes to improve interpretation of structural geology. Additional wells could be drilled and produced within the CX Field. MBOGC has established well spacing rules for the field that allow for four wells per coal seam per 160 acres, with the exception of Sections 26 and 35, T. 9 S., R. 40 E. and Sections 9, 10 and 20, T. 9 S. R. 41 E., which allows for 16 wells per coal seam per 640 acres.

It is also reasonably foreseeable that some wells would be plugged and abandoned, and that associated sites would be reclaimed. Based on the predicted 10 percent ratio of future well abandonment to future drilling, (MT FEIS page MIN-29), 3 - 4 of the proposed Fidelity Dry Creek wells would be dry holes within 20 years, and would count toward the total of 2,600 anticipated dry holes statewide over the same time period.

2.3.3-1 Future rate of CBNG drilling

RFD/RFFA area	Number of wells predicted in the next 20 years	Number of wells drilled to date
Statewide	26,000 wells	509
County (BH, RB) area*	3,500-9,800 wells	495

*BH = Big Horn, RB = Rosebud

Proposed Future CBNG development:

- *CX Field:* Additional wells could be drilled and produced within the CX Field. MBOGC has established well spacing rules for the field which allows for four wells per coal seam per 160 acres, with the exception of Sections 26 and 35,

T. 9 S., R. 40 E. and Sections 9, 10 and 20, T. 9 S. R. 41 E., which allows for 16 wells per coal seam per 640 acres. Due to the scope and nature of this proposed project, as well as the distance from the Dry Creek POD, cumulative impacts are likely to occur to wildlife, ground and surface water, air, cultural, mineral, vegetation and aquatic resources. See Ch. 4, Environmental Consequences, for cumulative effects relating to each resource.

- *Yates Petroleum Corporation*: Yates Petroleum has submitted applications to BLM for the drilling and testing of 14 wildcat CBNG wells scattered across an area from 5 miles north to 20 miles northeast of the producing CX Field. The proposal shows 1 well would be drilled at each well site, with 640 acre spacing. Due to the scope and nature of this proposed project, as well as the distance from the Dry Creek POD, no potential of cumulative impacts are likely to occur.

- *CX Field (Fidelity - Coal Creek Proposal):* Fidelity has submitted a proposal to MBOGC and the BLM to drill and produce an additional 210 CBNG wells, and construct and install the associated infrastructure in the Coal Creek area of the CX Field. The proposed project area is immediately east of existing Badger Hills production in the field. Fidelity proposes drilling 132 federal wells, 16 state wells and 62 private wells on 47 well sites, with 1 to 5 wells drilled on each site. These CBNG wells would be completed in the Dietz 1, Dietz 2, Dietz 3, Monarch and Carney coal seams. Due to the scope and nature of the CX Field (Coal Creek POD), as well as its proposed location in proximity to the Dry Creek POD, potential cumulative effects are likely to occur to wildlife, ground and surface water, air, cultural, mineral, vegetation and aquatic resources. See Chapter 4, Environmental Consequences, for cumulative effects relating to each resource.

- *Powder River Gas (Coal Creek Project):* See the Powder River Gas-Coal Creek Project in the Relevant Present Actions, section 2.3.2. For future analysis purposes, it is anticipated that an additional 28 wells (on 14 well sites) would be developed, based on the 80-acre well site density in the POD area. Produced gas would be marketed to a gas utility company's pipeline system. The activities of the Powder River Gas-Coal Creek project, as well as its proposed location in proximity to the Dry Creek project, may cause cumulative effects to wildlife, ground and surface water, air, cultural, mineral, vegetation and aquatic resources. See Chapter 4, Environmental Consequences, for cumulative effects relating to each resource.

Coal

Wolf Mountain Coal, Inc. proposes to build a stoker coal processing plant on private land for retail sales of stoker coal in Lot 1, Section 18, T. 8 S., R. 40 E.; BLM recently issued them a right-of-way (MTM93074) for a power line across federal surface in the NE¼SE¼, Section 13, T. 8 S., R. 39 E., to provide power to the proposed site. BLM has not reviewed a copy of the proposed project. Cumulative impacts are unknown at this time.

Tongue River Railroad

The Surface Transportation Board has published a Draft Supplemental Environmental Impact Statement for the Tongue River Railroad Company's (TRRC) proposed rail line construction in Rosebud and Big Horn Counties, Montana. The document analyzes the proposed 17.3 mile "Western Alignment" route, which had been preceded by two related applications that were considered and approved by the Board in 1986 and 1996, respectively. The proposed Western Alignment is an alternative route for the southernmost portion of the 41-mile Ashland to Decker alignment; known as the Four Mile Creek Alternative. The proposed Western Alignment bypasses the Four Mile Creek alignment, which is generally located from the Birney Road (Hwy 566) and the Tongue River Canyon junction, running west to Hwy 314, then south to the Decker Mine. The Western Alignment would continue south along the Tongue River on the ridge, but paralleling the river and ending around the Spring Creek Mine area. This proposed route would terminate approximately 5 miles north of the Dry Creek project area. Although the Dry Creek project is within 5 miles of the southern sections on the proposed TRRC Four Mile Creek and Western Alignment routes, the two projects would not be constructed simultaneously. The Dry Creek project drilling and production infrastructure installation would be completed within 2-6 months after project approval.

2.4 PREFERRED ALTERNATIVE IDENTIFICATION

The BLM has identified *Alternative B, Fidelity's Proposed Plan of Development with Additional Mitigation Measures*, as its Preferred Alternative.

2.5 COMPARISON OF ALTERNATIVES

Table 2.6-1 compares the major components of the two alternatives. Table 2.6-2 compares the major effects identified in Chapter 4 from each of the alternatives.

Table 2.6-1. Fidelity Exploration & Production Company - Dry Creek Project--Comparison of Alternatives

Project Component	Alternative A – No Action (Existing Situation)	Alternative B – Proposed Action with Additional Mitigation (preferred alternative)
Well Drilling Activities:		
Number and land status of CBNG wells in the Dry Creek Area	0 Federal wells 0 State wells 108 Private wells (pvt surface/pvt minerals) 0 POD Federal wells 11 POD State wells (st surface/st minerals) 3 POD Private wells (pvt surface/pvt minerals) Total=122 Existing Wells	25 Federal wells* 0 State wells 0 Private wells 122 Existing Wells *10 private surface locations and 2 BLM surface locations Total=147 Wells
Drilling Actions	No drilling actions.	24 federal CBNG wells would be drilled with portable, truck mounted, water well drilling rigs to depths of approximately 250 feet to 1,000 feet. Air and fresh water (including coal seam water) would be used in drilling, supplemented as needed by bentonite and sawdust or wood chips. Steel casing would be cemented in place from ground surface to the top of the target coal seam. The casing would be sized to accommodate a downhole pump to lift water, but would typically be seven inches in diameter. The well would then be drilled to the base of the target coal and under reamed to increase the exposed coal surface for production. A diverter would be installed to control pressures and a minimum of three centralizers would be installed on the production casing spaced to protect shallow coals and aquifers. Anticipated drilling period to last approximately two months.
Disposal of drilling wastes	No wastes would be generated.	Drill cuttings, water, mud and excess cement would be placed in 15'L by 6'W by 15'D reserve pit. The reserve pits would be fenced stock tight to prevent livestock and wildlife access, after the drilling rig has moved off of the location. After evaporation of fluids, pits would be filled with soil and compacted to prevent settling. This would occur within 3-4 weeks after drilling and completion of the well. Wastes would be contained onsite and disposed of at the Sheridan landfill. Chemical "porta-potties" would be used at active construction, drilling and battery sites.
Production Support Facilities:		
Field Battery Sites and Sales Battery Site (compressor sites)	5 existing batteries CX 14	No new battery construction. CX 14 – service 5 federal wells

Project Component	Alternative A – No Action (Existing Situation)	Alternative B – Proposed Action with Additional Mitigation (preferred alternative)
	CX 19 CX 24 CX 25 CX 35 1 existing sales battery Symons Central Compressor Station	CX 19 – service 8 federal wells CX 24 – service 4 federal wells CX 25 – service 6 federal wells CX 35 – service 2 federal wells Symons Central Compressor Station – Sales Battery
Gas & Water flowlines Electrical Lines	No construction. Existing infrastructure: -Approximately 3.2 miles gas gathering pipeline not within a combined corridor -Approximately 8.8 miles water transmission pipeline not within a combined corridor -Approximately 1.45 miles electric line located outside of a combined corridor -Approximately .8 miles of corridor located on state surface -Approximately 14.6 miles of water, gas, electric in two track corridors exist in the POD The unauthorized "off-lease" facilities on two tracts of Federal surface within the POD area would remain unauthorized under this alternative.	Approximately 2.85 miles along existing two track and 2.63 miles along proposed two track (15 feet corridor) Buried plastic flowline to carry gas from each well of the 25 wells to a battery site. Multiple flowlines will be placed in same trench. Trenches would parallel roads to extent feasible. Electricity would be brought into the project area from existing lines throughout the field. Most of the buried electrical cables would be installed inside of the road, gas and water corridors, except for approximately .5 miles. These underground lines would tie into the existing aerial power lines at service taps. Produced water would be transported through buried plastic flowlines from each well site to a discharge point on the Tongue River, a stock tank, water impoundment or Spring Creek Mine. The outfall structure will consist of a rock riprap plunge pool lined with an anti-erosion fabric. An energy dissipation device would be installed to decrease erosion potential. One additional overhead power line, about ½ mile, would be constructed to provide service to those wells located in sections 13 & 18. This line would be constructed entirely on private surface. A right-of-way would be required for "off-lease" facilities on Federal surface.
Access:		
Road maintenance and use	Road maintenance and use would be that of the current situation. Approximately 5.9 miles of improved road and 7.8 miles of two track exist in the POD boundary (12 feet corridor)	Approximately 1.8 miles of new and 8 miles of existing two-track trails would be used to access the proposed federal well sites (12 feet corridor) A right-of-way would be required for "off-lease" access roads on Federal surface. Estimated use of access would be 6 vehicles per day during the drilling period

Project Component	Alternative A – No Action (Existing Situation)	Alternative B – Proposed Action with Additional Mitigation (preferred alternative)
Produced Water Management:		
Discharge of Produced Water to the Tongue River via MPDES # MT-0030457	Approximately 1,040 gpm of untreated CBNG water was being discharged to the Tongue River when this POD was submitted. 2 existing outfall points will be utilized for the water produced from the 14 recently drilled fee and state wells. Approximately an additional 98 gpm of untreated CBNG water would be discharged to the Tongue River for a cumulative total of 1,138 gpm.	2 existing outfall points (4 & 6) will be utilized for the water produced from the 25 federal wells. Approximately an additional 175 gpm of untreated CBNG water would be discharged for a cumulative total of 1,313 gpm.
Beneficial Uses	Approximately 400 gpm to coal mines for dust suppression, or to stock tanks or off channel reservoir 23-0299 for watering livestock.	Same as Alternative A
Reclamation:		
Reclamation Measures	The surface would be reclaimed in accordance with the agreements with landowners. The disturbed areas would be seeded with a certified seed mix agreed to by the NRCS and the surface owner.	Same as Alternative A plus the following: • Updated plans at time of reclamation • Reserve pit closure standards • Seedbed preparation standards • Vegetation success standards • Erosion control measures • Bond release standards, including involvement of pvt surface owners
Reclamation Timeframes	Reclamation would take place within 1 year where specific surface disturbing activities have been completed, and concurrent with other operations in the project area.	Same as Alternative A
Monitoring Plans:		
Air Quality	Per MDEQ Requirements for testing to demonstrate compliance with emission limits and Annual Emission Inventories.	Same as Alternative A
Wildlife	None required.	Monitoring of specific wildlife species is required: • Prairie dog towns and suitable mountain plover habitat • Bald eagle winter roosts • Big game crucial winter range • Raptor nest success and productivity • Sage and sharp-tailed grouse activity
Soils	Sites would be monitored during various stages of development and reclamation to ensure erosion is limited	Same as Alternative A.
Water Quality	Per MDEQ MPDES requirement.	Same as Alternative A.

Table 2.6-2. Fidelity Exploration & Production Company – Dry Creek Project—Summary Comparison of Effects

Affected Resource & Effect Indicators	Existing Resource Conditions	Alternative A – No Action	Alternative B – Proposed Action with Additional Mitigation (preferred alternative)
Air Quality:			
Pollutant concentrations	The area of the proposed project is currently classified as attainment/unclassified for the National Ambient Air Quality Standards. Therefore, the area is considered to be in compliance with ambient air quality standards. Existing criteria pollutant concentrations are in compliance with MAAQS and NAAQS, except for one violation of the 24 hour PM10 MAAQS in 2003 near Lame Deer in Rosebud County, Montana.	Resource conditions would remain the same because no emissions sources would be added. Concentrations of NO_2, CO, SO_2 and PM_{10} in compliance with MAAQS and NAAQS. Concentrations of NO_2 in compliance with PSD Class I at the Northern Cheyenne Reservation and in adjacent PSD Class II areas.	Same as alternative A except, with Alternative B the highest pollutant emitted would be TSP (30.65 tons per year). Actual emissions from the project would be well below the MAQP threshold, because (1) controlled emissions from Alternative B would exhibit good dispersion characteristics; (2) emissions would not exceed MDEQ permit thresholds; and (3) emissions would be temporary in nature. MDEQ determined that controlled emissions from the source would not cause or contribute to a violation of any ambient air quality standard.
Visibility	Visibility monitoring data for Northern Cheyenne Reservation are not yet available. Recent visibility monitoring data for Yellowstone National Park show no worsening trend.	Visibility in compliance with thresholds for mandatory federal Class I areas. Potential exceedances of voluntary visibility threshold at other sensitive locations from cumulative sources.	Same as alternative A
Atmospheric Deposition	Existing atmospheric deposition monitoring at Little Big Horn Battlefield National Monument shows precipitation pH values are normal.	Atmospheric deposition in compliance with voluntary lake chemistry threshold in sensitive lakes.	Same as alternative A
Cultural Resources:			
National Register listed or eligible sites	No sites are currently listed on the National Register within the POD area. Three sites within the POD area are considered eligible for the National Register.	No impact to cultural resources.	No sites eligible or listed on the National Register would be affected

Affected Resource & Effect Indicators	Existing Resource Conditions	Alternative A – No Action	Alternative B – Proposed Action with Additional Mitigation (preferred alternative)
Areas of traditional cultural value	No sites currently identified as areas of traditional cultural value exist within the POD area.	No impact to areas of traditional cultural value.	Same as Alternative A.
Hydrology:			
Water Quality Direct Impacts:			
Maximum SAR at Birney Day School during Low Monthly Mean (LMM) Flows MDEQ Std = 3.0 N. Ch. Std = 2.0	**1.18** SAR values are well below the water quality standards.	**1.18** There would be no change in SAR. SAR values would remain well below the water quality standards and all beneficial use support would be maintained.	**1.20** There would be a 1.7% increase in SAR. SAR values would remain well below the water quality standards and all beneficial use support would be maintained.
Maximum EC at Birney Day School during LMM Flows MDEQ Std = 1000 µS/cm N. Ch. Std = 1000 µS/cm	**730 µS/cm** EC values are well below the water quality standards.	**730 µS/cm** There would be no change in EC. EC values would remain well below the water quality standards and all beneficial use support would be maintained.	**733 µS/cm** There would be a 0.4% increase in EC. EC values would remain well below the water quality standards and all beneficial use support would be maintained.
Maximum SAR at Birney Day School during 7Q10 Flows MDEQ Std = 4.5 N. Ch. Std = 2.0	**1.80** SAR values are well below the water quality standards.	**1.80** There would be no change in SAR. SAR values would remain well below the water quality standards and all beneficial use support would be maintained.	**1.83** There would be a 1.7% increase in SAR. SAR values would remain well below the water quality standards and all beneficial use support would be maintained.
Maximum EC at Birney Day School during 7Q10 Flows MDEQ Std = 1500 µS/cm N. Ch. Std = 2000 µS/cm	**1138 µS/cm** EC values are well below the water quality standards.	**1138 µS/cm** There would be no change in EC. EC values would remain well below the water quality standards and all beneficial use support would be maintained.	**1141 µS/cm** There would be a 0.3% increase in EC. EC values would remain well below the water quality standards and all beneficial use support would be maintained.
Water Quality Cumulative Impacts:			
Maximum SAR at Birney Day School during LMM Flows MDEQ Std = 3.0 N. Ch. Std = 2.0	**1.24** SAR values are well below the water quality standards.	**1.24** There would be no change in SAR. SAR values would remain well below the water quality standards and all beneficial use support would be maintained.	**1.29** There would be a 4.0% increase in SAR. SAR values would remain well below the water quality standards and all beneficial use support would be maintained.
Maximum EC at Birney Day School during LMM Flows MDEQ Std = 1000 µS/cm N. Ch. Std = 1000 µS/cm	**733 µS/cm** EC values are well below the water quality standards.	**733 µS/cm** There would be no change in EC. EC values would remain well below the water quality standards and all beneficial use support would be maintained.	**739 µS/cm** There would be a 0.7% increase in EC. EC values would remain well below the water quality standards and all beneficial use support would be maintained.

Affected Resource & Effect Indicators	Existing Resource Conditions	Alternative A – No Action	Alternative B – Proposed Action with Additional Mitigation (preferred alternative)
Maximum SAR at Birney Day School during 7Q10 Flows MDEQ Std = 4.5 N. Ch. Std = 2.0	**1.86** SAR values are well below the water quality standards.	**1.86** There would be no change in SAR. SAR values would remain well below the water quality standards and all beneficial use support would be maintained.	**1.95** There would be a 4.8% increase in SAR. SAR values would remain well below the water quality standards and all beneficial use support would be maintained.
Maximum EC at Birney Day School during 7Q10 Flows MDEQ Std = 1500 µS/cm N. Ch. Std = 2000 µS/cm	**1132 µS/cm** EC values are well below the water quality standards.	**1132 µS/cm** There would be no change in EC. EC values would remain well below the water quality standards and all beneficial use support would be maintained.	**1140 µS/cm** There would be a 0.7% increase in EC. EC values would remain well below the water quality standards and all beneficial use support would be maintained.
Water Quantity Direct Impacts:			
Max total discharge rate to Tongue River Permitted Discharge = 1600 gpm	**1,138 gpm** (2.54 cfs) The current discharge rate is well below the permitted limit.	**1,138 gpm** (2.54 cfs) There would be no change in discharge rate, and discharge would continue to be well below the permitted limit.	**1,313 gpm** (2.94 cfs) There would be a 15.4% increase in discharge rate over existing conditions; however discharge would continue to be well below the permitted limit.
Maximum Flow at Birney Day School during LMM Flow	**175.54 cfs** (78,782 gpm)	**175.54 cfs** (78,782gpm) There would be no change in flow as a result of No Action.	**175.93 cfs** (78,957 gpm) There would be a 0.2% increase in flow over existing conditions.
Potential Radius of Direct 20' Drawdown Contour from Dry Creek POD over 20 yrs	Existing = <1 to 2 miles **Foreseeable = 4.77 miles** (25,204 feet)	**4.77 miles** (25,204 feet) No drawdown would be added as a result of No Action.	**4.77 miles** (25,210 feet) The radius of the 20' drawdown contour would increase by ~6 feet.
# of domestic or stock wells within the direct potential 20’ drawdown contour over 20 yrs	Existing = 16 wells **Foreseeable = 100**	**100** No additional wells would be added to the drawdown area as a result of No Action.	**100** The expansion of the radius of the 20' drawdown contour by 6 feet will not cause any additional wells to be added to the drawdown area.
# of springs within the direct potential 20’ drawdown contour over 20 yrs	Existing = 0 springs **Foreseeable = 16**	**16** No additional springs would be added to the drawdown area as a result of No Action.	**16** The expansion of the radius of the 20' drawdown contour by 1 foot will not cause any additional springs to be added to the drawdown area.
Water Quantity Cumulative Impacts:			

Affected Resource & Effect Indicators	Existing Resource Conditions	Alternative A – No Action	Alternative B – Proposed Action with Additional Mitigation (preferred alternative)
Max LMM Flow at Birney Day School	**181.83 cfs** (81,605 gpm)	**181.83 cfs** (81,605 gpm) There would be no change in flow as a result of No Action.	**182.22 cfs** (81,780 gpm) There would be a 0.2% increase in flow over existing conditions.
Potential Radius of Cumulative 20' drawdown contour from the well field over 20 yrs	Existing = <1 to 2 miles **Projected = 4.79 miles** (25,300 feet)	**4.79 miles** (25,300 feet) No drawdown would be added as a result of No Action.	**4.79miles** (25,304 feet) The radius of the 20' drawdown contour would increase by ~4 feet.
# of domestic or stock wells within the cumulative potential 20' drawdown over 20 years	Existing = 16 wells **Projected = 110**	**110** No additional wells would be added to the projected drawdown area as a result of No Action.	**110** The expansion of the radius of the 20' drawdown contour by 4 feet will not cause any additional wells to be added to the drawdown area.
# of springs within the cumulative potential 20' drawdown contour	Existing = 0 springs **Projected = 19**	**19** No additional springs would be added to the projected drawdown area as a result of No Action.	**19** The expansion of the radius of the 20' drawdown contour by 4 feet will not cause any additional springs to be added to the drawdown area.
Indian Trust and Native American Concerns:			
Indian Trust Assets	No Indian trust lands or leases are present within the project area	No impact to Indian Trust Assets	Same as Alternative A.
Lands and Realty:			
Rights-of-ways	There are no authorized R/Ws on the proposed affected Federal surface. There is an existing unauthorized "off-lease" access road and some existing unauthorized "off-lease" buried gas and water lines on two tracts of Federal surface within the POD area.	A R/W would be required for the existing "off-lease" facilities on Federal surface.	A R/W would be required for the existing and proposed "off-lease" facilities on Federal surface.
Social and Economic Conditions:			
Federal production-MCF	258,209 (2001 data)	No Change	6.9 BCF lifetime production
Federal Royalties	$118,646 (2001 data)	No Change	3.4 million dollars lifetime revenue

Affected Resource & Effect Indicators	Existing Resource Conditions	Alternative A – No Action	Alternative B – Proposed Action with Additional Mitigation (preferred alternative)
Environmental Justice	In 2000, 24% of the population living in Big Horn County and 17% of the population in Rosebud County had incomes below the poverty level. These figures compare to a state figure of 13% and reflect the relatively large numbers of persons on the reservations living in poverty.	No Change	No Change
Soils:			
Approximate acres of Disturbance: Roads Well Pads (before/after reclamation) Corridors (including those below): Gas/Water Flowlines Buried Electric Lines	Existing infrastructure: 18.6 acres 11 acres (44 existing locations) 26.1 acres 20.8 acres 1.4 acres	 0 acres 0 acres 0 acres 0 acres 0 acres	 2.7 acres new road 11 acres / 2.75 acres (11 well sites) 10.9 acres total 0 acres outside corridors .9 acres outside corridors
Vegetative productivity on roads	800 lbs./acre for two-track roads 1400 lbs./acre undisturbed lands	800 lbs./acre for two-track roads 1400 lbs./acre undisturbed lands	100 lbs./acre for two-track roads 0 lbs./acre on improved roads
Vegetation:			
Montana Plant Species of Concern	One Montana Plant Species of Concern is known to exist within the POD boundary. Another Montana Plant Species of Concern lies just outside the POD boundary.	Existing CBNG activity has occurred in the same legal location where a Montana Plant Species of Concern was documented. Impacts to Barr's milkvetch are possible.	No additional impacts from the addition of the federal wells.
Wildlife and Fisheries/Aquatics:			
Habitat fragmentation and disturbance in project area	Project area is fragmented by county gravel road, two-track trails, and authorized CBNG infrastructure	No change from existing situation	Increased habitat fragmentation and disturbance from 11 well sites, 1.8 miles of new roads, and 8 miles of two-track roads.
Electrocution hazard level	Existing aerial powerlines pose electrocution hazard	No change from existing situation	Increased electrocution hazard with 0.5 miles additional overhead power
Proximity to T&E species habitat	Light disturbance to potential bald eagle winter roost and foraging habitat	No change from existing situation	The CBNG development poses a potential disturbance to bald eagles, with two nests approximately 4 miles from federal development