CX RANCH FIELD – CBM WELL DRILLING APPLICATIONS

Fidelity E&P Company
1842 Sugarland Drive
Sheridan, Wyoming 82801

State Oil & Gas Lease No. OG-31304-94
Township 9 South, Range 39 East
Section 36: N½, SW¼, NE¼SE¼
Big Horn County, Montana

Fidelity Exploration and Production Company (Fidelity) has proposed the drilling and completion of up to 11 coal bed methane (CBM) wells on a tract of school trust land in Section 36, Township 9 South, Range 39 East within the existing CX field. These 11 wells are included in Fidelity's "Tongue River-Dry Creek" plan of development, which also includes proposals for 3 fee and 22 federal wells on other land within the field.

The CX field is located south of Decker on the Montana-Wyoming border. The field currently produces approximately 609 million cubic feet of natural gas per month from 273 wells. Average well production is approximately 74 mcf gas per day and about 3 gallons per minute of produced water.

The Montana Board of Oil and Gas (BOGC), Montana Department of Environmental Quality (DEQ) and the Federal Bureau of Land Management (BLM) prepared a programmatic environmental impact statement (EIS) on CBM development in Montana. The final EIS was issued in January 2003. Records of Decision were issued by the BOGC, BLM, and DEQ in March, April, and August 2003 respectively. The joint Federal/State EIS provides a multi-agency programmatic analysis document which agencies can tier from when evaluating site or project specific reviews of proposed actions.

Fidelity has proposed to develop the state tract at a well density of one well per 160 acres per coal zone. Therefore, the 11 wells proposed for the state tract are co-located on three pad sites, one in the northwest quarter, one in the southwest corner, and one in the northeast corner of Section 36. Up to five wells would be co-located at each pad site in order to develop and produce from five specific coal zones. Even with five co-located wells, each of the three pad sites would utilize less than one acre. No new roads are required, as wells are remotely monitored. Buried flowlines are utilized for water and natural gas production from the wells. Gas production is routed to compressor/manifold stations adjacent to state land.

The surface of the state tract is leased for grazing. The lessee has no water developments on the tract. As part of the development on the state tract, and per discussions with the surface lessee, Fidelity will install a stockwater development on the tract. All other produced water will be transported off the state tract via buried flowline, and will be handled along with other produced water per existing regulatory permits. Primary

delivery points are either to the Spring Creek Mine for dust suppression, or the Tongue River as authorized by the DEQ.

Other sections in the field will continue to be developed regardless of whether development occurs on the state trust section. Surface impacts are minimal, and include a beneficial stockwater installation on the state tract. No compressor stations, water discharge, storage ponds, or irrigation will be present on state lands. Development and production of natural gas from Section 36 will positively impact local and state tax revenue. The state school trust would receive royalty revenue equivalent to 12.5% of the gross value of the produced natural gas from the state tract. The Director recommends Land Board authorization for development of up to 11 wells on Section 36, Township 9 South, Range 39 East, pursuant to state oil and gas lease No. OG-31304-94.

DEPARTMENT OF NATURAL RESOURCES
AND CONSERVATION

TRUST LAND MANAGEMENT DIVISION
JUDY H. MARTZ, GOVERNOR
1625 ELEVENTH AVENUE
STATE OF MONTANA
DIRECTOR'S OFFICE (406) 444-2074
TELEFAX NUMBER (406) 444-2684
PO BOX 201601
HELENA, MONTANA 59620-1601

January 7, 2004

Dear Reader:

The Montana Department of Natural Resources, Trust Land Management Division, has prepared an Environmental Assessment for the state trust land section of the Tongue River-Dry Creek Coal Bed Methane Project proposed by Fidelity Exploration and Production Company. The state section is comprised of lands in Section 36 (W2, NE4, NE4SE4), Township 9 South, Range 39 East, in Bighorn County, Montana.

Please provide written comments on this Environmental Assessment by February 6, 2004. The project proposal will be presented to the State Board of Land Commissioners at their February 17, 2004 meeting. Comments can be submitted either electronically or by mail to the following:

Bobbi Jo Lorengo
Department of Natural Resources and Conservation
Trust Land Management Division
P.O. Box 201601
Helena, MT 59620-1601
bolorengo@state.mt.us

If you have any questions regarding this Environmental Assessment, please call (406) 444-9518. We appreciate your interest in the management of state trust lands.

Sincerely,

Bobbi Jo Lorengo

Bobbi Jo Lorengo
Petroleum Engineer
Minerals Management Bureau

STATE OF MONTANA

DEPARTMENT OF NATURAL RESOURCES AND CONSERVATION
TRUST LAND MANAGEMENT DIVISION

ENVIRONMENTAL ASSESSMENT
TONGUE RIVER – DRY CREEK PROJECT
Township 9 South, Range 39 East, Section 36: W2, NE4, NE4SE4
Big Horn County, Montana

January 7, 2004

CHAPTER 1: PURPOSE AND NEED

PROJECT OVERVIEW

Fidelity Exploration and Production Company (Fidelity) has proposed to develop a coal bed methane (CBM) project, the Tongue River-Dry Creek Project in Big Horn County, Montana (See Figure 1). This project lies within the existing CX Field authorized by BOGC Order No. 174-2000. There are currently 275 producing wells in the CX Field. The Dry Creek Project will consist of drilling and completing 36 CBM wells (3 fee, 11 state, and 22 federal) within Township 9 South, Ranges 39 and 40 East. These wells lie within the existing field. It is estimated that the project will commence in 2004 with completion within three years. The production lifetime of the wells will be approximately ten to fifteen years. Individual wells and related facilities are reclaimed at the end of their useful life. Chapter 2, Proposed Action and Alternatives of this Environmental Assessment (EA) provides a detailed description of the state trust land component of the Dry Creek Project.

PURPOSE AND NEED

Fidelity holds valid federal, state, and private oil and gas leases in the Dry Creek Project Area. The purpose of Fidelity's proposal is to extract and gather natural gas from the portions of the Project Area leased by them. Oil and Gas leases issued by the State of Montana require the lessee to submit proposed activities on the state lease premises to the department for review. For coal bed methane production wells, approval by the department and the Montana Board of Land Commissioners (Land Board) is required prior to implementation of the proposed activities. Land Board and the department authority extends only to state trust land.

This EA serves two purposes. First, it provides pertinent information on the proposed action to the decision maker (Land Board). Second, it identifies potential mitigation measures to address issues and approval conditions for site locations.

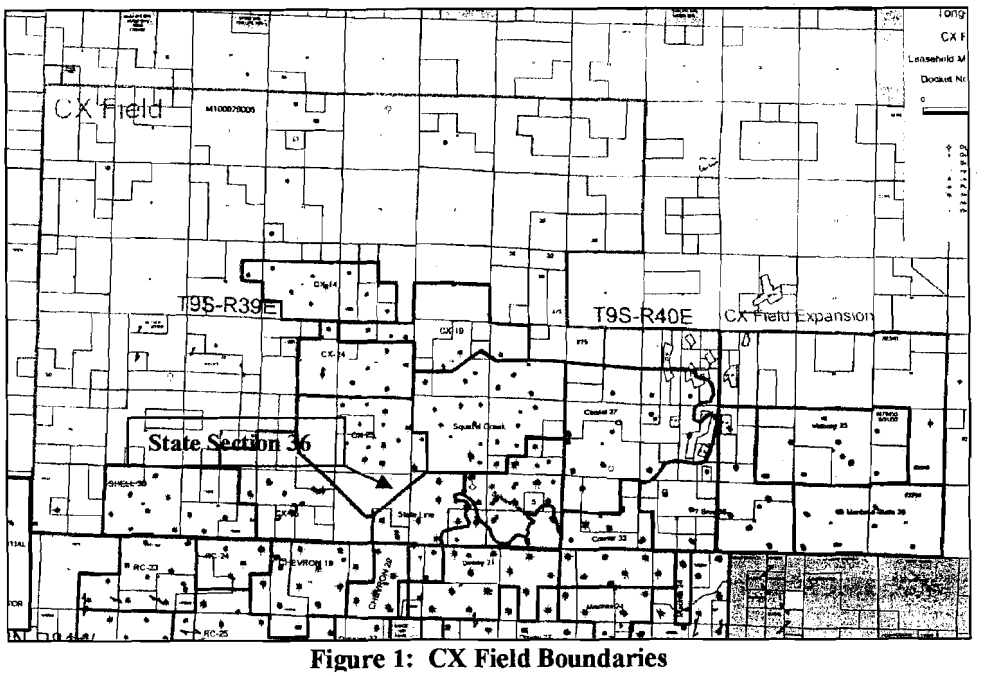

Figure 1: CX Field Boundaries

CHAPTER 2: PROPOSED ACTION AND ALTERNATIVES

INTRODUCTION

This Chapter of the Environmental Assessment describes the CBM Dry Creek Project proposed by Fidelity. In addition, the alternatives are identified.

This site-specific EA is tiered from and integrates the information and analyses contained in the Programmatic Environmental Impact Statement on Oil and Gas Drilling Production in Montana by Montana Board of Oil and Gas (MBOGC) approved January 1989, the Montana Statewide Final Oil and Gas EIS and Amendment of the Powder River and Billings RMPS (Statewide FEIS) approved April 30, 2003, and the CX Field Expansion EA prepared by MBOGC and approved August 6, 2003.

Fidelity submitted a Plan of Development (POD), detailing the Dry Creek Project proposal. This POD covers proposed activities on state, fee and Federal land, even though the department's review authority covers only the activities proposed on state trust land. The POD includes design features, construction practices, and water management strategies associated with the proposed action. Individual Application for Permit to Drill (APD's) are also submitted, as required by the MBOGC.

PROPOSED ACTION

The proposed action consists of the construction, drilling, testing, production, and reclamation activities for 36 vertical CBM wells, 11 of which are on state trust lands. The projected target for each of the eleven State wells is the Fort Union coals. Five different coal seams are targeted: Dietz 1, Dietz 2, Dietz 3, Carney, and Monarch. They range in depth from approximately 200 feet to 900 feet. Table 1 shows the proposed drill site locations.

TABLE 1: Proposed CBM well sites organized by pad description.

Well Number	Township	Range	Section	Spot Call	Proposed TD
NORTHWEST PAD SITE					
22C-3699	9S	39E	36	SENW	715'
22D-3699	9S	39E	36	SENW	480'
22M-3699	9S	39E	36	SENW	560'
NORTHEAST PAD SITE					
42C-3699	9S	39E	36	SENE	690'
42D1-3699	9S	39E	36	SENE	335'
42D2/3-3699	9S	39E	36	SENE	415'
42M-3699	9S	39E	36	SENE	520'
SOUTHWEST PAD SITE					
24C-3699	9S	39E	36	SESW	655'
24D1-3699	9S	39E	36	SESW	313'
24D2/3-3699	9S	39E	36	SESW	380'
24M-3699	9S	39E	36	SESW	535'

Well Construction

Vehicles will access well sites by existing roads and trails, constructed roads, and/or across undisturbed rangeland. Wells will be drilled on approved well spacing per targeted coal seam. CBNG produced water will be used to drill from surface to approximately +/- 60 feet. Surface casing will be set at approximately +/- 60 feet and cemented back to surface. From 60' to total depth, drilling will be done with CBNG produced water and weighting agents (bentonite/gels) as necessary. Due to the low pressures encountered, Blow Out Prevention Equipment will not be necessary. However, a diverter capable of diverting increased uphole pressures will be used. Production casing will be set at total depth and cemented back to surface if commercial quantities of hydrocarbons exist. State plug and abandonment guidelines will be followed when the wells are no longer needed.

Water Management

The CX Field currently has 273 producing CBNG wells within the Tongue River Montana Project (TRMP). Total water production from the existing TRMP is approximately 844 gallons per minute (gpm). A majority of produced water from existing and the proposed wells will be directly discharged into the Tongue River under the existing MPDES permit number MT 0030457 (02/27/03). This permit allows for a total of 1600 gpm to be discharged into the river. Thus the total project water production would increase from 844 gpm to approximately 1204 gpm as the wells are first placed on production, with water productions then declining to field average levels. Since this level falls within the allowable permitted volume, no additional discharge permits are necessary.

As part of a field Water Management Plan (WMP), Fidelity is contemplating transferring approximately 190 gpm to the Spring Creek Coal Mine for industrial use and to the CX Ranch for stock water use as requested by surface owners and/or lessees. Furthermore, an existing storage reservoir located in Section 2, can be utilized for water storage and/or irrigation systems may be constructed in Sections 24 and 25 of Township 9 South, Range 39 East, and Sections 19 and 20 in Township 9 South, Range 40 East.

To manage the increased water production from this project, Fidelity may increase the reservoir storage capacity of Pond 23-0299 (Section 2, Township 9 South, Range 39 East) from the current 41.17 acre-ft to as much as 295 acre-ft and construct up to 160 acres of irrigation by Spring 2004. Plans for reservoir enlargements, additional reservoirs and/or irrigated acreages will be submitted to the MBOGC and Bureau of Land Management (BLM) for approval prior to any water discharge or irrigation with produced water. No water discharge, storage ponds, or irrigation will take place on state Section 36.

Montana DNRC Preferred Alternative

The preferred alternative includes the previously described action relative to the eleven wells proposed on state trust land with the following exceptions. During on site field visits to each of the proposed locations, all areas of proposed surface disturbance

were inspected to ensure that potential impacts to natural resources would be minimized. Alternatives to the different aspects of the proposed action are considered and applied as site-specific stipulations, if they would alleviate or minimize the environmental effects of the operator's proposal. The stipulations identified for the Tongue River-Dry Creek Project are as follows:

- The State 22D1-3699 well site was moved west to avoid a natural drainage that would run through the pad site.
- The proposed underground power lines for State 22-3699 well pad site will not be installed until a revised route that avoids the identified cultural sites has been established or site 24BH2240 has been evaluated following a DNRC data recovery plan and that site has been determined ineligible for listing in the National Register of Historic Places.
- The proposed access road to the State 42D1-3699, 42D2/3-3699, 42C-3699, and 42M-3699 well sites was moved to minimize the impacts to an existing reservoir.
- A stock water facility will be installed per coordination with DNRC Area Office and surface lessee.

All of these stipulations are incorporated into Montana DNRC's preferred alternative and the CX Field Operating and Reclamation Requirements, which can be found in Appendix A.

Development and production of natural gas from state Section 36 will positively impact local and state tax revenue. The state school trust would receive royalty revenue equivalent to 12.5% of the gross value of the produced natural gas from the state tract. Based on the performance of wells throughout the existing CX Field, development of the state tract could generate up to $1.5 million in royalty revenue to the school trust over the life of these 11 wells.

The additional CBM development on state trust land proposed under this action represents minimal land disturbance (less than 2 acres) within the existing CX field.

No Action Alternative

The Alternative to the previously mentioned alternative is that the operator's proposal would be denied and no new state wells would be constructed. However, operation of the existing CX Field would continue and drilling of new wells would still occur on federal and private lands. Since the CX Field currently surrounds state Section 36, the no action alternative would allow gas to be drained from the state trust land over time, due to the existing development adjacent to the section. Up to $1.5 million in trust royalty revenue could be foregone.

CHAPTER 3: AFFECTED ENVIRONMENT

DESCRIPTION OF EFFECTED ENVIRONMENT

Applications to drill were received by DNRC on December 15, 2003. Field inspections of the Proposed Tongue River-Dry Creek CBNG project were conducted on December 17, 2003.

CHARACTERISTICS OF PROJECT AREA:

Air: Ambient air quality throughout the project area is good. Coal mining operations north of the project area may cause localized increases in suspended particles or Sulfur Dioxide.

Air pollution is controlled through the ambient air quality and emission standards established by the Clean Air Act and under Montana laws implemented by the Montana Department of Environmental Quality (MDEQ). The Clean Air Act Amendments of 1977 created a system for the Prevention of Significant Deterioration (PSD) of "attainment" and "unclassified" areas. The Northern Cheyenne Indian Reservation is approximately 6 miles north of the POD and is the closest PSD Class I area. A Class I area is one in which any degradation of air quality would be significant. The surrounding areas, including the POD, lie in a Class II area, which means that there is an allowance for moderate, controlled air impacts.

Cultural Resources: Cultural Resources are tangible remains of past human activity within the landscape. Cultural resources are identified and defined as geographic units or "sites" where past human activity occurred and evidence of past use can be documented. Generally, any site of human activity older than 50 years can be considered a cultural resource.

Fidelity contracted Ethnoscience, Inc. of Billings, MT to conduct a Class III cultural resource inventory for state Section 36 on September 28, 2003. A total of 70 acres were investigated encompassing all three proposed CBM well pad sites and associated features and facilities, including two track trails leading to the well pad site. One site was located within the project boundary and a second site was located northwest of the development area.

Invasive Species: No state listed noxious weeds and invasive/exotic plant infestations were discovered by a search of inventory maps, databases, or field evaluation.

Lands and Realty: There are currently four DNRC issued right-of-ways (ROW) within state Section 36. Highway 338 runs from the E2SW4 through the NE4 (Easement No. D-04673). An existing all weather county road runs through the NE4NE4 of state Section 36 (Easement No. D-04857). This road will be used to access four state well sites. A second all weather road runs through Lots 1 and 5, E2NE4, and NE4SW4 (Easement No. D-03272). This road will be used as the primary access road to the remaining seven state

wells. A fourth easement is in effect for two overhead powerlines in NE4NE4 (Easement No. D-10224).

Fidelity submitted an application on December 22, 2003 to conduct 2D Seismic operations within CX field, a portion of which crosses state trust lands. It was reviewed and approved by DNRC via EA Check List, which concluded no significant impact from this activity. Permit #1421 was granted on January 7, 2004 and Fidelity will be conducting activity within the next year.

Soils: Fort Union and Watsatch Formations are at the surface of the project area. The Fort Union is composed of sandstone, siltstone, clay shale, coal beds, and localized impure limestone and lignite. The Watsatch is composed of light colored massive sandstones, drab colored shale and lignite. Erosion by wind and water has created a very jagged topography where the more resistant sandstone and scoria form hills and buttes. Increased precipitation during the era of glacial retreat amplified surface water flows and accelerated erosion, helping to create high inactive alluvial terraces and gravel chapped trenches. Detailed information regarding soil composition can be found in the Soil Appendix of the FEIS (SOI 1-13).

Surface and Groundwater: This project area lies within the Tongue River watershed.

A water rights search for this area showed 19 registered stock and domestic water wells within a one-mile radius of the Dry Creek Project area. No water wells lie within State Section 36.

If approved, five state CBNG wells will be completed in the Deitz coal zone. These wells are projected to initially produce a total of 50 gpm. Three state wells will be completed in the Carney coal zone for an initial total of 30 gpm. Three state wells will be completed in the Monarch coal zone for an initial total of 30 gpm. It is anticipated that the quality of water will be similar to the water quality obtained from the existing CBM wells throughout the CX field.

At the time of the onsite visit, there was no live surface water within the state section. Information and discussion regarding surface water is provided in the Statewide FEIS Chapter 3, Affected Environment, pages 3-22 through 3-31.

Vegetation: Short grass prairie species of vegetation occupy the POD area. Sage, thickspike wheatgrass, prickly pear cactus, needle and thread, green needlegrass, prairie junegrass, and western wheatgrass were all observed throughout state section 36. Differences in dominant species vary with soil type and topography. There are no known threatened or endangered plant species within the section.

Wildlife: Fidelity has contracted with Hayden-Wing Associates (HWA) to develop a Baseline Wildlife Inventory for the Dry Creek Project Area. These surveys were conducted in accordance with requirements set forth in the CBNG Wildlife Monitoring and Protection Plan for the Statewide FEIS. Included in HWA's wildlife inventory is information concerning surveys for raptors including bald eagles, prairie dogs, mountain plover, sage grouse and sharp tailed grouse, and the Black-footed Ferret. The following is a summary of wildlife habitat characteristics, including information gathered by HWA in the project area.

Many different species of raptors were identified throughout the POD area. Twenty active nests were identified within the one-mile buffer of the project area, but only one was located within the Dry Creek POD. The raptor species consisted of golden eagle, red-tailed hawk, great horned owl, bald eagle, and prairie falcon. None of the active nests are located within state Section 36 of the POD. One Golden Eagle's nest was located just west of Section 36, but it is over ½ mile from any proposed development. Other raptor species of concern in the project area are Swainson's hawk, osprey, American kestrel, ferruginous hawk, and burrowing owl. Although no observations of these species exist within the project area or the one-mile buffer, it is possible that one or more of these species could use the area in the future. The Bald Eagle is the only raptor identified that is on the Federally-Designated Threatened or Endangered Species list in this area, but the closest is over a mile away from any proposed development area. The Statewide EIS require a No Surface Occupancy (NSO) within ½ mile of nests that have been active during the past 7 years.

Six black tailed prairie dog towns were identified and mapped within the Dry Creek POD. Two lie within state Section 36, and two others are adjacent to the state section. Town #4 totaled 60.1 acres and Town #5 totaled 9.9 acres. It was estimated that all six towns within the POD had a burrow density of greater than 8 per acre. Town #5 lies in the direct proximity of proposed drilling locations. Prairie dog complexes (aggregation of two or more prairie dog towns separated by a distance less than 4.34 miles) that total 80 acres or more are considered large enough to serve as a potential food source for the black-footed ferret. Direct impact to qualifying complexes must be avoided to prevent any potential significant impact to the black-footed ferret. Although black footed ferrets are not known to inhabit this area, well sites have been located to avoid this prairie dog town complex.

Mountain plover habitats usually occur within the boundaries of prairie dog towns. Due to this relationship, all black tailed prairie dog towns are considered potential mountain plover habitat. Field survey found no mountain plover presence or indication of utilization.

No sage grouse or sharp tailed grouse leks are known to occur within the Dry Creek POD. However, two previously documented leks are located within two miles of the POD. Neither of them have an impact on state Section 36.

State Section 36 is located within a mule deer wintering range. Highway 338, which runs through the section, also provides recreational access for hunting. However, no impacts are anticipated due to the off season drilling operations and offset areas of similar development.

During the course of the 2003 surveys, other wildlife species were recorded including the mule deer, white tailed deer, wild turkey, cottontail, American tree sparrow, Canada goose, horned lark, and killdeer.

Social and Economic Impacts: Social and economic impacts of CBM development are discussed in detail in the Statewide EIS and in the Socioeconomic Appendix to the EIS. This proposed action involves developing addition production within the CX field to include the eleven state wells. Additional demands on governmental services, impacts on county facilities, and significant relocation or population increases are not anticipated as a result of the development of the state Section 36. Increase in natural gas production is

probable which would increase both state and county tax income. The state trust fund would directly benefit from additional royalty revenue generated from natural gas production.

Noise: The major sources of noise within the project area are localized vehicular traffic and light industry activity on the existing roadways leading to the project area. These noise sources currently create only modest sound disturbances within the area.

Fluctuations in noise level would occur during the drilling and testing phases of development of this area caused by drilling rigs and support vehicles but they will be short lived. No compressors or batteries will be located within state Section 36.

Aesthetics: The Dry Creek POD lies within the existing CX Field. The CX Field Operating and Reclamation Requirements (Appendix A) establishes guidelines to minimize aesthetic impacts. Production equipment will be painted to blend with the natural environment, whenever possible. The well pads are not located on a prominent topographical feature and buried lines will be used throughout the state section.

CHAPTER 4: ENVIRONMENTAL CONSEQUENCES

Air: Air quality may fluctuate slightly in the immediate vicinity of the project area during drilling and production due to increased suspended particulate matter generated during drilling operations and vehicle travel on unimproved roads. Gas emissions from drilling rig engines, and gas venting during well tests could also occur.

The Montana Department of Environmental Quality (MDEQ) has the regulatory authority to review and issue permits covering all new or modified air pollution emission sources. These permits are required prior to construction.

Certain mitigations are available to minimize impacts to air quality. The operator has proposed to install remote monitoring equipment at the wellsite to decrease the amount of vehicle travel to and from the sites. Gas venting is minimized by a MBOGC regulatory requirement prohibiting venting of commercial quantities of gas. Because extensive infrastructure is already in place throughout the CX field, extensive well testing prior to pipeline hookup is not needed. No compressor stations are proposed on state Section 36. Drilling and completion of the 11 state wells would be a short-term activity causing no significant impact to air quality.

Cultural Resources: Cultural Resources are the tangible remains of past human activity within the landscape. There is one cultural resource site of concern located within the plan of development area. The POD proposed an underground power line running through the vicinity of the cultural site area. To mitigate the risk of site disturbance, it will be necessary to determine an alternate route that will avoid the site completely or the site will be evaluated following a DNRC data recovery plan and determined ineligible for listing in the National Register of Historic Places prior to constructing the underground power line.

State Section 36 is located approximately 6 miles from the Northern Cheyenne Indian Reservation and within the existing CX Field. The proposed action will not significantly impact any special or unique qualities of the area.

Invasive Species: Opportunities for weed invasion and spread increase with the utilization of existing facilities and the construction of access roads, pipelines, water lines, and related facilities. The development of state Section 36 introduces activity which could contribute to the establishment and spread of noxious weeds and invasive plants. Fidelity has outlined a Noxious Weed Control Plan in the POD. Mitigation processes addressed within the CX Field Operating and Reclamation Requirements (see Appendix A) mitigate impacts due to invasive plants and noxious weeds.

Lands and Realty: The POD for this field has no proposals for additional right of ways.

Locally Adopted Environmental Plans and Goals: This area of development is not part of any locally adopted urban planning area. However, a number of environmental documents and regulatory oversight is in place to ensure activities in the CX Field are conducted in a manner consistent with applicable laws and regulations.

Soils and Vegetation: The impacts to soils and vegetation in this area should be minimal based on Fidelity's POD and DNRC's CX Field Operating and Reclamation Requirements (Appendix A). Up to five wells are being drilled per pad to minimize surface disturbance to the section, which totals less than two acres. Reserve pit construction and soil compaction from vehicles will be the only disturbance. Disturbance from well drilling and completion of coal bed methane production wells and their related facilities (including pipelines and power lines) is of brief duration and presents only minimal impacts to soil and vegetation. DNRC requires drilling site disturbance to be reclaimed as wells are completed for production.

Surface and Ground Water: Fidelity has submitted a comprehensive Water Management Plan (WMP) for this project. The WMP incorporates sound water management practices, monitoring of downstream impacts to the Tongue River, and commitment to comply with Montana State water laws and regulations. It also addresses potential impacts. The discharges to the Tongue River have been evaluated against all pertinent standards by the MDEQ pursuant to their regulatory permitting authority.

The maximum water production is predicted to be 10 gpm per well or 360 gpm for the entire Dry Creek Project Area. The eleven state wells would have a maximum initial rate of 110 gpm, which would then decline to field averages. As the water produced from this POD would be combined with the water being produced from the existing 273 wells in the Tongue River Project area, a total initial maximum of 1288 gpm would have to be managed. Since the existing MPDES discharge permit (MT 0030457) allows a maximum discharge rate of 1600 gpm, the entire project may be discharged into the Tongue River under the existing permit.

Wildlife: Potential impacts to wildlife may be direct or indirect. Examples of potential direct impacts would be loss of habitat due to road construction and facility development, or increased mortality due to vehicle and powerline collisions. Examples of potential indirect impacts include habitat division and displacement related to infrastructure and human disturbances and activities. Potential impacts to wildlife resources related to CBNG development are discussed in detail in the Statewide FEIS (Chapter 4, pages 4-160 and 4-196).

The proposed action on state section 36 will utilize approximately one mile of existing two track trails and will not require any new road construction. Traffic may increase slightly during well drilling and completion. This is of short duration and would not significantly impact wildlife mortalities. The proposed action of drilling 11 wells on state Section 36, inside existing CX Field operation, would reduce habitat by less than 2 acres and would not significantly affect habitat fragmentation or displacement.

Remote monitoring equipment will be installed at the wellhead to minimize the amount of traffic traveling through the area. Therefore, the effect on wildlife due to vehicle activity is minimal.

There will be approximately one mile of above ground power lines and about two miles of pipeline/buried powerline within the state section. This would temporarily disturb the surface, but buried lines will be reclaimed and revegetated as needed during construction. Raptor protection guidelines are required for power poles.

There are no sage grouse leks within two miles of state Section 36, therefore, disturbance will be minimal.

There are no known bald eagle winter roosts or important foraging areas within one mile of any state well proposed in this project. This project is not suspected to disrupt bald eagle winter habitat/activity. The closest active bald eagle nest to the entire project area lies over a mile south of any proposed well. However, this action is not expected to impact this nesting pair of eagles.

There are no known active raptor nests within ½ mile of the development areas. Therefore, disturbance to nesting raptors within Section 36 will be minimal.

This proposed action will lie within a prairie dog complex. However, the prairie dog town that is in the vicinity of the proposed well sites is only 9.9 acres and only a very small section will come in contact with a buried flow line development. Installing and reclaiming the development area will be of no significant impact to the dog town. Black footed ferrets are known to reside within large prairie dog towns within prairie dog complexes. Consultation with BLM's Biologist confirmed that avoidance is a suitable mitigation for this situation.

Social and Economic: The POD lies within the existing CX Field. Increase in natural gas production is probable which would increase both state and county tax income. The state trust fund would directly benefit from additional royalty revenue generated from natural gas production. Since the 11 proposed state trust wells would be located within the existing CX Field operation, no significant impacts to human health and safety, employment distribution and quantity, government services, population, or housing will be generated by this project.

CHAPTER 5: AGENCY CONSULTATION AND PUBLIC COMMENT

The following agencies were consulted throughout the development of this Environmental Assessment:

- Fidelity Exploration and Production Company
- Bureau of Land Management – Miles City, MT Office
- Montana Board of Oil and Gas
- Montana Department of Environmental Quality
- Montana Department of Fish, Wildlife and Parks
- Mr. And Mrs. Rodney and Anita McCloy, Surface Lessee

Public comment was solicited via press release, website posting, and mail out to interested parties.

Prepared By: Bobbi Jo Lorengo, Petroleum Engineer, Minerals Management Bureau

Bobbi Jo Lorengo

Date: January 7, 2004

Proposed Action:
Based on foregoing approval of this proposed action with site-specific stipulations and pursuant to CBM, CX Field Operations and Reclamation Requirements, activities proposed for the state tract do not constitute a major action significantly affecting the environment, and no further analysis is needed. Approval of this action is contingent upon the regulatory approval by Montana Board of Oil and Gas Conservation.

Approved By: Monte Mason, Chief, Minerals Management Bureau

Monte D Mason

Date: February 10, 2004

COMMENTS

Tongue River Water Users Association

February 3, 2004

Bobbi Jo Lorengo
Department of Natural Resources and Conservation
Trust Land Management Division
P.O. Box 201601
Helena, Mt 59620-1601

COMMENTS: ENVIRONMENTAL ASSESSMENT OF THE TONGUE RIVER - DRY CREEK PROJECT

Dear Bobbi Jo:

In regards to the Environmental Assessment Of the Tongue River - Dry Creek Project I would like to submit the following comments for the Tongue River Water Users Association.

Water Management: Attached are the printed analyses from two sets (each set contains three samples) of water samples taken for the Tongue River Waters Users. The **first** set was taken on 11/23/03 and shows that the Sodium Adsorption Ratio (SAR) is 0.55 at the Helvey Site, which is where Tongue River crosses into Montana for the first time. The second set taken (also at the Helvey Site) on 12/20/03 shows an SAR of 0.53-or about the same. Samples taken at the Railroad Bridge Site, which is below Fidelity's discharges into Tongue River, show that on 11/23/03 the SAR has increased from 0.55 at the Helvey Site to 0.84 at the Railroad Bridge Site. Similarly, the SAR of the water samples taken on 12/20/03 shows an increase from 0.53 at the Helvey Site to a 0.79 at the Railroad Bridge Site. The third sample was taken below the Tongue River Dam. On 11/23/03 the SAR at this site was 0.79 and on 12/20/03 the SAR had risen to a 0.83. 1

From 11/24/03 to 12/19/03 the volume of water in Tongue River Dam went from 43,692 acre feet to 45,254 acre feet, a gain of 1562 acre feet. Fidelity's discharges of 884 gpm would account for approximately 111 acre feet of that 1562 acre feet gain. The additional 110 gpm that are going to be discharged from the wells on the state land will increase the total discharges to 954 gpm. If you covert 954 gpm to acre feet per year it come out to

approximately 1512 acre feet-which was about the natural flow of Tongue River from November to December of 2003. This increase of 110 gpm does not sound like much but when calculated over the life of the project it amounts to hundreds of tons of additional salts being added to the river. 2

Powder River Gas Company now has an application before the Department of Environmental Quality to treat the water using the Higgins LoopTM process (see enclosed brochure from EMIT). This process is also being used in Wyoming today and the State of Montana should require it to be used on all coal bed methane gas production from state lands. By using the Higgins LoopTMprocess the harmful salts are removed from the CBM water before it is discharged into Tongue River-water that is bought from the state by the farmers and ranchers of the Tongue River Valley for irrigation. 3

Another option is to re-inject the CBM water. The Madison aquifer is about 2000 feet deep at Decker and has about the same water quality as the water being produced from CBM production. In the long term it would benefit Montana to store the CBM production water in the Madison formation and then pump it back into the coal aquifers when CBM production is finished. 3 It would also be beneficial to the State if the bacteria that causes methane would be cultured or enhanced and then added to the re-injected water, thus making methane a renewable resource while assuring an adequate water supply for Montana's future.

The preferred option will waste the water and degrade the Tongue River and the private property of the agricultural businesses of the Tongue River Valley. 2

Sincerely,

Art Hayes Jr., President
Tongue River Water Users Association
PO Box 578
Bimey, MT 59012-0578

Attorneys at Law

Reynolds, Motl and Sherwood

A -Professional Limited Liability Partnership

Linda M Deola
Elizabeth Griffing
Brenda Lind;ef Hall
Jonathan R. Motl
Jamas P Reynofds
Frederick F. Sherwood
Deborah S. Smith
David K.W Wilson, Jr.

401 North Last Chance Gulch
Helena, Montana 59601
(406) 442-3261
Fax (406) 443-7294
email.- brhaff@qwest.net

February 6, 2004

Bobbi Jo Lorengo. Petroleum Engineer
Minerals Management Bureau
Trust Land Management Division
Department of Natural Resources and Conservation
P.O. Box 201601
Helena, Mt 59620-1601
(406) 444-2684 (fax) **VIA FACSIMLE AND REGULAR MAIL**

Re: Comments on the Tongue River-Dry Creek Coal Bed Methane Project Environmental Assessment

Dear Ms. Lorengo:

On behalf of the Tongue River Water Users' Association, I submit the following comments on the above-referenced Environmental Assessment (EA).

As an initial matter, we note that the EA includes only Fidelity Exploration and Production Company's proposal and a no action alternative. We know that other alternatives exist and therefore believe the present EA for the Tongue River-Dry Creek project is deficient for failing to analyze the other viable alternatives. 4

It is widely known that reinjecting the produced CBM water is a commonly used method for disposing of the wastewater. Therefore, an alternative analyzing reinjection should be developed and included in the EA. Likewise, we also know that there are methods available for treating CBM produced wastewater. Presently the Powder River Gas Company has proposed to treat produced CBM wastewater associated with its development using the Higgins Loop' process. A copy of their proposal is available at the Montana Department of Environmental Quality. Again, as with reinjection, this is an alternative that should be carefully examined in the environmental assessment for this project. 3

We believe that the failure to develop and analyze reinjection and water treatment, and the failure to provide such information to the public, is a violation of the Montana Environmental Policy Act (MEPA), §§ 75-1-101, *et seq.,* and its implementing regulations 36.2.501 A.R.M. *et seq.* As you are no doubt aware, 36.2.523 provides that: 3

(2) An EA may serve any of the following purposes-.

(b) to assist in the evaluation of reasonable alternatives and the development of conditions, stipulations or modifications to be made a part of a proposed action;

(e) to determine the need to prepare an EIS through an initial evaluation and determination of the significance of impacts associated with a proposed action

(d) to ensure the fullest appropriate opportunity for public review and comment on proposed actions, including alternatives and planned mitigation, where the residual impacts do not warrant the preparation of an EIS.

Additionally, it does not appear that there is any analysis of the potential impacts on or resulting from groundwater drawdown. The EA states that there are " 19 registered stock and domestic water wells within a one mile radius of the Dry Creek Project." Given this information, and given how precious water in general is in this and region of Montana, an assessment of the impacts on aquifer drawdown should be included in the EA. To the best of our knowledge, the are no dedicated groundwater monitoring wells, and apparently no plans for such monitoring wells in the Dry Creek project area. This information should be disclosed in the EA. 5

Impacts on groundwater and surface water quality are also not disclosed or analyzed. Although the EA states that one of the holding ponds to which water from this project will likely be discharged will potentially be increased in capacity from "41.17 acre 'feet to as much as 295 acre feet," there is no discussion of the potential impacts of storing this amount of water. Certainly there will be impacts associated with storing such a large volume of highly saline and sodic water, which could impact both ground and surface water. There is also no discussion of what standards, if any, are in place for constructing, lining, or managing such a large impoundment. Undoubtedly, the potential exists for such impoundments to leak highly saline and sodic water into the shallow groundwater, as well as impact alluvial and surface waters through overflow and capture of surface waters. And although the EA states that the water will not be discharged or stored on State section 36, produced water is coming from State section 36, and 6

the water produced from the state lands wells will very possibly have impacts to the riverine and groundwater systems in the Tongue River Valley.

For your information and consideration, I have attached two documents. One is a scientific paper written by Thomas J. Schneider entitled "Coal Bed Methane Produced Water Reinjection," May 16, 2001. The other is a recent newspaper article discussing water treatment technology that is currently being employed for treating CBM water. That article is entitled "WWII-Era Science Offers Way to Handle Coalbed Methane Discharge," Mike Stark, Billings Gazette, Jan. 9, 2004. I submit the two attached articles only as examples of the abundant information that is currently available on the issues surrounding reinjection and water treatment. 1

Finally, Art Hayes, Jr., President of the Tongue River Water Users' Association, sent separate comments to you regarding the Tongue River Dry Creek EA. These comments are supplemental to, and do not replace, the thoughtful comments of Mr. Hayes.

Thank you for this opportunity to comment.

Sincere Regards,

Brenda Lindlief Hall

c: Art Hayes, Jr., President
Tongue River Water Users' Association

encl

Comment submitted via email:

Bobbi Jo Lorengo
Petroleum Engineer
Department of Natural Resources and Conservation
Trust Land Management Division
P.O. Box 201601
Helena, MT 59620-1601
bolorengo@state.mt.us

Please accept our comments in support of this project. This is the second plan of development submitted and it is time to act. Our recent poll of Montana voters showed that a very strong majority feel we should strongly encourage the oil and gas industry and we think this is an excellent project.

Development is already occurring around the project area, potentially draining away state reserves. The water from these new wells is expected to be a small volume. The gas will go to existing metering and compressor facilities, so the amount of new surface disturbance is minimal. Conservative estimates suggest these wells could generate $687,500 in royalty payable to the State School Trust Fund and $445,000 in production tax to the state. This is clearly an action the Land Board should approve at its February 17 meeting. 6

We appreciate the opportunity to comment. Please contact me with any questions or comments.

Webb Scott Brown, CAE, President/CEO

Montana Chamber of Commerce - your business advocate Montana Liability Coalition, Montana Manufacturing Council, and Montana Assn. of Chamber Executives 2030 Eleventh Avenue, Suite 21 / PO Box 1730 Helena, Montana 59624-1730 406-442-2405 ext. 101 / 406-442-2409 fax / 406-431-9508 cell www.montanachamber.net / webb@montanachamber.com or:

Webb Brown, Executive Vice President

Montana Chamber Foundation

406-443-7888
PO Box 1162
Helena MT 59624-1162

Comment submitted via email:

Mary Bloom, Bureau of Land Management

Hi Sharon - Thanks for the opportunity to review your EA. I thought it was easily readable. Miles City has 1 comment: the EA doesn't appear to address cumulative effects. Let me know if I'm mistaken or if you have any questions. Thanks, Mary 7

Mary_Bloom@blm.gov [mailto:Mary_Bloom@blm.gov]

RESPONSE TO COMMENTS

1. Attached documents are on file with the department's Trust Land Management Division and are available for inspection.

2. Comment is outside the scope of the EA. The Board and department do not have authority over water management and discharge activities that do not occur on state trust land. These activities are under the statutory jurisdiction of the MDEQ and MBOGC. The water that would be produced from the proposed wells falls within available discharge capacity already analyzed and permitted by the MDEQ (permit number MT 0030457).

3. Comment is outside the scope of the EA. Water management and discharge options are under the statutory jurisdiction of the MDEQ and MBOGC.

4. The proposed action within the authority of the State board of Land Commissioners encompasses the drilling and completion of eleven wells and related flowlines and powerlines. The EA recommends an action alternative that includes compliance with CX Field Operating and Reclamation Requirements developed for CBM activities on state trust land in the CX Field, as well as 4 requirements specific to the proposed action on State section 16. The alternatives discussed in the comment involve operations outside the scope of the EA, for activities under the statutory jurisdiction of state regulatory agencies.

5. As noted in the EA, existing CBM wells and production surround the state section 16 on all sides. None of the referenced stock or domestic water wells are located on the state section. Therefore, the proposed wells on the state tract have no ability to impact existing stock or domestic water utilization. The EA also discloses that developing the wells on the state section will include installation of a stockwater development on the state tract, thereby improving water availability for surface lessee grazing.

6. Comment is outside the scope of the EA. The proposal to develop holding ponds is described and disclosed in the document, but are not proposed to be located on the state section. Design standards for such impoundments have been developed by MDEQ, as an integral part of their regulatory permitting process.

7. MEPA requires consideration of concurrent actions by state agencies. In this case, the only concurrent action is the regulatory review of the 11 state and 3 fee wells by the MBOGC. Water management for these 14 wells is within the jurisdiction of the MDEQ, but the existing DEQ permit already covers the water from these wells. Since state land is subject to MBOGC and MDEQ regulatory authority, any approval by the Trust Land Management Division and/or Board of Land Commissioners does not allow the activity to occur unless the state regulatory agencies also grant the necessary regulatory permits. In this case, the regulatory review to be completed by MBOGC will cover all state and fee wells, which implicitly covers impacts for all actions under state agency review.

APPENDIX 1

CX FIELD OPERATING AND RECLAMATION REQUIREMENTS

*DNRC refers to DNRC Trust Land Management Division (TLMD)

A. Notifications

a. Notify the DNRC, Southern Land Office at least 48 hours prior to beginning any construction and/or drilling operations (406-247-4400).
b. Any variances from the following guidelines or the site specific stipulations must be approved by DNRC.
c. The lessee (lessee includes lessee, operator, contractors, or any other agent conducting activities on lease premises pursuant to authority conveyed by the state lessee) shall obtain approval prior to construction of any new surface disturbing activities that are not specifically addressed in the approved operating plan or POD Surface Use Plan.
d. Phased reclamation plans will be submitted to DNRC for approval prior to individual POD facility abandonment.
e. A notice of Intent to Abandon must be submitted for approval. Upon completion of plugging, a copy of the Subsequent Report of Abandonment must also be submitted.
f. If any cultural values (sites, artifacts, human remains) are observed that were not previously addressed, reviewed, and approved by DNRC, they will be left intact, operations stopped, and the DNRC notified immediately. The lessee is responsible for informing all persons in the area who are associated with this project that they will be subject to prosecution for knowingly disturbing historic or archaeological sites, or for collecting artifacts. DNRC will conduct an evaluation of the cultural values to establish appropriate mitigation, salvage, or treatment. If additional archaeological survey work is required, lessee will be responsible for this expense.

B. Construction

a. Vehicle Travel:
    i. Construction and other project related traffic will be restricted to approved routes. Cross country vehicle travel will not be allowed.
    ii. Maximum speed on all lessee constructed and maintained roads will not exceed 25 miles per hour.
    iii. The lessee shall restrict travel on unimproved two-track roads during periods of inclement weather or spring thaw when the possibility exists for excessive surface resource damage (e.g. rutting in excess of 4 inches, travel outside two-track roadway, etc). This applies to pre-approval APD-POD planning (surveying, staking), drilling, production, and reclamation operations.

b. Construction activities can only occur pursuant upon DNRC written approval of the operating plan.
c. All construction activities for off wellpad facilities will be addressed in an operation plan submitted by Fidelity Exploration and Production Company.
d. Soil:
    i. Stockpiled topsoil and pit material must be stored to prevent material from entering drainages.
    ii. Equipment cannot be stored on the topsoil stockpile.
    iii. The lessee will limit vegetation removal and the degree of surface disturbance, utilizing all practicable measures to minimize erosion and stabilize disturbed soils.
    iv. Topsoil will be salvaged for use in reclamation on all areas of surface disturbance (roads, locations, pipelines, etc). Clearly segregate topsoil from excess spoil material.
    v. The lessee will not push soil material and overburden over side slopes or into drainages. All soil material disturbed will be placed in an area where it can be retrieved without creating additional undue surface disturbance and where it does not impeded watershed and drainage flows.
    vi. Construct the backslope no steeper than ½:1, and construct the foreslope no steeper than 2:1 unless otherwise directed by DNRC.
    vii. Maintain a minimum 20 foot undisturbed vegetative border between toe of fill pad and/or pit areas and the edge of adjacent drainages, unless otherwise directed by DNRC.
e. Drilling, casing, and cementing operations shall be designed and conducted as requested by MBOGC.
f. Construction and drilling activity will not be conducted using frozen or saturated material during periods when watershed damage or excessive rutting is likely to occur.
g. With the overall objective of minimizing surface disturbance and retaining land stability and productivity, the lessee shall use equipment that is appropriate to the scope and scale of work being done for roads and well pads (use equipment no larger than needed for the job).
h. To minimize electrocution potential to birds of prey, all overhead electrical power lines will be constructed to standards identified by the Avian Power Line Interaction Committee (1996).
i. The lessee shall use wheel trenches or ditch witches to construct all pipeline trenches, except where extreme topography or other environmental factors preclude their use.
j. Reserve pits:
    i. Reserve pits will be adequately fenced during and after drilling operations until pit is reclaimed so as to effectively keep out wildlife and livestock. Adequate fencing is defined as follows:
        1. Construction materials will consist of steel or wood posts. Three or four strand wire (smooth or barbed) fence or hog

panel (16 foot length by 50 inch height) or plastic snow fence must be used with connectors such as fence staples, quick-connect clips, hog rings, hose clamps, twisted wire, etc.

2. Construction standards: Posts shall be firmly set in ground. If wire is used it must be taut and evenly spaced, from ground level to top wire, to effectively keep out animals. Hog panels must be tied and sturdy. Fence must be at least 2 feet from edge of pit. Three sides must be fenced prior to commencing drilling, and the fourth side of the fence immediately upon completion of drilling, prior to rig release. Fence must be left up and maintained in adequate condition until pit is closed.

ii. The reserve pit will be oriented to prevent collection of surface runoff. After the drilling rig is moved, the lessee may need to construct a trench on the uphill side of the reserve pit to divert surface drainage around it. If constructed, the trench will be left intact until the pit is closed.

iii. The reserve pit will be lined with an impermeable liner if required by the DNRC or MBOGC. An impermeable liner is any liner having a permeability less than 10-7 cm/sec. The liner will be installed so that it will not leak and will be chemically compatible with all substances that may be put in the pit. Liners made of any man-made synthetic material will be of sufficient strength and thickness to withstand normal installation and pit use. In gravelly or rocky soils, a suitable bedding material such as sand will be used prior to installing the liner.

iv. The reserve pit will be constructed so that at least half of its total volume is in solid cut material (below natural ground level).

v. The only fluids/waste materials which are authorized to go into the reserve pit are RCRA exempt exploration and production wastes:
   1. Drilling muds and cutting
   2. Rigwash
   3. Excess cement and certain completion and stimulation fluids defined by EPA as exempt

vi. It may not include drilling rig waste, such as:
   1. Hydraulic fluids
   2. Engine oil
   3. Oil filters
   4. Cement, drilling mud, or other product sacks
   5. Paint, pipe dope, chemical, or other product container.
   6. Chemicals and chemical rinsate.

vii. Any evidence of non-exempt wastes being put into the reserve pit may result in the DNRC requiring specific testing and closure requirements.

k. Culverts:
    i. Culverts will be placed on channel bottoms on firm, uniform beds, which have been shaped to accept them, and aligned parallel to the channel to minimize erosion. Backfill will be thoroughly compacted.
    ii. All culverts will be appropriately sized.
l. Pipelines:
    i. Pipeline construction shall not block nor change the natural course of any drainage. Pipelines shall cross perpendicular to drainages. Pipelines shall not be run parallel in drainage bottoms. Suspended pipelines shall provide adequate clearance for maximum runoff.
    ii. Pipeline trenches shall be compacted during backfilling. Pipeline trenches shall be routinely inspected and maintained to ensure proper settling, stabilization, and reclamation.
m. During construction, emissions of particulate matter from well pad and road construction would be minimized by application of water or other non-saline dust suppressants with at least 50 percent control efficiency. Dust inhibitors (surfacing materials, non-saline dust supressants, and water) will be used as necessary on unpaved roads that present a fugitive dust problem. The use of chemical dust suppressants on state surface will require prior approval from DNRC.
n. Lessees are required to obtain a National Pollution Discharge Elimination System (NPDES) Storm Water Permit from MDEQ as required prior to any suface disturbing activities.
o. If in the process of air drilling the wells there is a need to use mud, all circulating fluids will be contained either in an approved pit or in an aboveground containment tank. The pit or containment tank will be large enough to safely contain the capacity of all expected fluids without danger to overflow. Fluid and cuttings will not be squeezed out of the pit, and the pit will be reclaimed in an expedient manner.
p. Production facilities (including dikes) must be placed on the cut portion of the location and a minimum of 15 feet from the toe of the back cut unless otherwise approved by DNRC.
q. A complete copy of the Application for Permit to Drill (APD), including conditions, stipulations, and the H2S contingency plan (if required) shall be available for reference at the well site during the construction and drilling phases.
r. This drilling permit is valid for either one year from the approval date or until lease expiration, whichever comes first.

C. Operations/Maintenance

a. Waste Disposal:
    i. Trash or other debris must not be disposed of on the pad.
    ii. Burning of materials or oil is not allowed.
    iii. All waste, other than human waste and drilling fluids, will be contained in a portable trash cage. This waste will be transported

to a State approved waste disposal site immediately upon completion of drilling operations. No trash or empty barrels will be placed in the reserve pit or buried on location. All state and local laws and regulations pertaining to disposal of human and solid waste will be complied with.

iv. Sewage shall be placed in a self-contained, chemically treated porta-potty on location.

v. The lessee and their contractors shall ensure that all use, production, storage, transport, and disposal of hazardous materials associated with the drilling, completion, and production of these wells will be in accordance with all applicable existing and hereafter promulgated federal, state, and local government rules, regulations, and guidelines. All project related activities involving hazardous materials will be conducted in a manner to minimize potential environmental impacts. In accordance with OSHA requirements, a file will be maintained onsite containing current Material Safety Data Sheets (MSDS) for all chemicals, compounds, and/or substances which are used in the course of construction, drilling, completeion, or production operations.

b. The lessee shall complete CBNG wells (case, cement, and under ream), or abandon as soon as possible, but no later than 30 days after drilling operations, unless an extension is given by DNRC.

c. Confine all equipment and vehicles to the access road(s), pad(s), and area(s) specified in the approved APD or POD.

d. Rat and mouse holes shall be filled and compacted from the bottom to the top immediately upon release of the drilling rig from the location.

e. Noxious Weeds:

i. The lessee will be responsible for prevention and control of noxious weeds and weeds of concern on all areas of surface disturbance associated with this project (well locations, roads, water management facilities, etc.) Use of pesticides shall comply with the applicable State laws. Pesticides shall be used only in accordance with their registered uses and within limitations. Lessee shall monitor disturbed areas for the presence of noxious weeds from June through September throughout the life of the field.

ii. Control efforts must be done as necessary and as specified by DNRC once noxious weeds are identified with the intent of erradicating and preventing seed production.

f. All permanent above-ground structures (e.g. production equipment, tanks, etc.) not subject to safety requirements will be painted to blend with the natural color of the landscape. The paint used will be a color acceptable to DNRC.

g. Lessees are advised that prior to installation of any oil and gas well production equipment which has the potential to emit air contaminants, the owner or lessee of the equipment must notify the Montana Department of

Environmental Quality (MDEQ) to determine permit requirements. Examples of pertinent well production equipment include fuel-fired equipment (e.g. diesal generators), separators, storage tanks, engines, and dehydrators.

h. Fire Safety:
    i. During the fire season (June-October), the lessee shall institute all necessary precautions to ensure that fire hazard is minimized, including, but not limited to, mowing vegetation on the access route(s) and well location(s), keeping fire fighting equipment readily available when drilling, etc. DNRC may also require additional measures for fire prevention.
    ii. If a fire is started by lessee activities, the lessee may be liable for suppression costs by 50-63-103, MCA.
i. Erosion:
    i. Upgrade and maintain access roads and drainage control (e.g. culverts, drainage dips, ditching, crowning, surfacing, etc.) as necessary and as directed by DNRC to prevent soil erosion and accommodate safe, environmentally sound access.
    ii. DNRC may direct additional control measures for roads, pipelines, drainages, or other surface disturbances as needed.
j. Any spilled or leaked oil, produced water, or treatment chemicals must be reported in accordance with MBOGC requirements and immediately cleaned up in accordance with DNRC requirements. This includes cleanup and proper disposition of soils contaminated as a result of such spills/leaks.
k. Changes in operational and/or environmental conditions may require additional or modified requirements.
l. No construction or routine maintenance activities shall be performed during periods when the soil is too wet to adequately support construction equipment. If such equipment creates ruts in excess of 4 inches deep, the soil shall be deemed too wet to adequately support construction equipment.
m. All water discharge must comply with State law and must have permit prior to commencing.
n. Landscape those areas not required for production to the surrounding topography as soon as possible. The fluids and mud must be dry in the reserve pit before recontouring pit area. The lessee will be responsible for recontouring and reseeding of any subsidence areas that develop from closing a pit.

D. Dry Hole/Reclamation

a. When individual facilities such as well locations, pipelines, discharge points, impoundments, etc. are no longer needed, they need to be addressed in a reclamation plan and approved by the DNRC. Individual items that will need to be addressed in reclamation plans include, but are not limited to:

i. Configuration of reshaped topography, drainage systems, and other surface manipulations.
ii. Waste disposal
iii. Revegetation methods, including specific seed mix (pounds pure live seed/acre) and soil treatments (seedbed preparation, fertilization, mulching, etc.).
iv. Other practices that will be used to reclaim and stabilize all disturbed areas, such as water bars, erosion fabric, hydro-mulching, etc.
v. An estimate of the timetables for beginning and completing various reclamation operations relative to weather and local land uses.
vi. Methods and measures that will be used to control noxious weeds, addressing both ingress and egress to the individual well or POD.
vii. Decommissioning/removal of all surface facilities.
viii. Closure, reclamation, or approved transfer of areas utilized for produced CBNG water, including discharge points, reservoirs, off-channel pits, land application areas, livestock/wildlife watering facilities, surface discharge stream channels, etc.

b. For abandonment, surfacing material and culverts must be removed unless requested to remain in place by DNRC. The roads and ditches must be recontoured and seeded in accordance with DNRC requirements.
c. Pit reclamation:
    1. All pit(s) must be emptied of all fluids within 90 days after completion of drilling operations. The pit must be closed properly to assure protection of soil, water, and vegetation.
    2. Squeezing of pit fluids and cuttings is prohibited. Pits must be dry of fluids or they must be removed via vac truck or other environmentally acceptable method and disposed of in a State approved location prior to backfilling, recontouring, and replacement of topsoil.
    3. The pit may not be cut or trenched.
    4. Pit mud/sludge material may be buried onsite after the material has dried.
    5. The pit material must be covered with a minimum of 1 ½' of soil.
    6. The lessee will be responsible for recontouring any subsidence areas that develop from closing a pit.
    7. The plastic pit liner (if any) may be folded in with prior BOGC approval.
d. The reclamation effort will be evaluated as a success if the previously disturbed area is stabilized, all potential water erosion is effectively controlled and the vegetative stand is established with at least 70% cover.
e. All disturbed lands associated with this project, including the pipelines, access roads, water management facilities, etc. will be expediently

reclaimed and reseeded in accordance with the surface use plan and any pertinent site-specific reclamation.

f. Disturbed lands will be recontoured back to conform with existing undisturbed topography. No depressions will be left that trap water or form ponds.

g. Before the location has been reshaped and prior to redistributing the topsoil, the lessee will rip or scarify the drilling platform and access road on the contour, to a depth of at least 12 inches. The rippers are to be no further than 24 inches apart.

h. Topsoil shall be evenly distributed.. Prepare the seedbed by disking to a depth of 4 to 6 inches following the contour.

i. Waterbars are to be constructed at least one foot deep, on the contour with approximately two feet of drop per 100 feet of waterbar to ensure drainage, and extended into established vegetation. All waterbars are to be constructed with their berm on the downhill side to prevent the soft material from silting in the trench. The initial waterbar should be constructed at the top of the backslope. Subsequent waterbars should follow the following general spacing guidelines:

Slope (Percent)	Spacing Interval (Ft)
<2	200
2-4	100
4-5	75
>5	50

j. The lessee will drill seed on the contour to a depth of 0.5 inch, followed by cultivation to compact the seedbed, preventing soil and seed losses.
    i. Slopes too steep for machinery may be hand broadcast and raked with twice the specified amount of seed. To be effective, complete spring seeding after the frost has left the ground and prior to May 15. Fall or dormant seedings must be completed according to NRCS timing recommendations.

k. A Final Abandonment Notice must be submitted prior to a final abandonment evaluation by DNRC.

l. Soil fertility testing and the addition of soil amendments may be required to stabilize some disturbed lands.

m. Reduce the backslope to 2:1 and the foreslope to 3:1 unless otherwise directed by DNRC. Reduce slopes by pulling fill material up from foreslope into the top of cut slopes

n. The lessee shall seed all disturbed areas, using an agreed upon method suitable for the location. Seeding shall be repeated if a satisfactory stand is not obtained as determined by DNRC upon evaluation after the following growing season. The lessee shall seed all disturbed areas with the seed mixture(s) listed below unless otherwise approved by DNRC area office. The seed mixture(s) shall be planted in the amounts specified in pounds of pure live seed (PLS)/acre. There shall be no primary or

secondary noxious weed seed in the seed mixture. Seed shall be tested and the viability testing of seed shall be done in accordance with State law(s) and within six months prior to purchase. The seed mixture container shall be tagged in accordance with State law(s) and available for inspection by DNRC.

o. Seed shall be planted using a drill equipped with a depth regulator to ensure proper depth of planting where drilling is possible. The seed mixture shall be evenly and uniformly planted over the disturbed area. Smaller/heavier seeds have a tendency to drop to the bottom of the drill and are planted first. The lessee shall take appropriate measures to ensure this doesn't occur. Where drilling is not possible, seed shall be broadcast and the area shall be raked or chained to cover the seed. When broadcasting the seed, the pounds per acre noted below are to be doubled. The seeding will be repeated until a satisfactory stand is established as determined by DNRC. Evaluation of growth will not be made before completion of the second growing season after seeding. DNRC is to be notified a minimum of seven days prior to seeding of the project.

    i. **Seed Mixture** (silty, clayey, or silt clay loams)

        a) The combination must include at least four of the following species. Western wheatgrass must be included in the mix. Thickspike wheatgrass may be substituted for wheatgrass only when western wheatgrass in unavailable. Species and variety substitution may be approved by the DNRC Area Office.

Species of Seed	Variety	Common Name	Pound/acre PLS)*
Pascopyrum smithii	Rosanna	Western Wheatgrass	3.00
Pseudoroegneria spicata	Goldar	Bluebunch wheatgrass	2.00
Stipa viridula	Lodom	Green needlegrass	2.00
Elymus trachycaulus	Pryor	Slender wheatgrass	2.00
Stipa comata		Needle and thread	1.00
Bouteloua curtipendula		Sideoats Grama	2.00
Schizachyrium scoparium		Little bluestem	2.00

p. ** Pure live seed (PLS) formula: % of purity of seed mixture times % germination of seed mixture = portion of seed mixture that is PLS.*