

**Decision on Action and Application for Categorical Exclusion 1 (CX1)**  
**Section 390, Energy Policy Act of 2005**  
**North Butte Obligation 1 and North Butte 2 PODs**  
**Williams Production RMT Company LLC**  
**WY-070-CX1-10-233**  
**Bureau of Land Management, Buffalo Field Office**

**Description of the Proposed Action**

Williams Production RMT Company LLC (Williams) requests the BLM to approve the North Butte Obligation 1 and North Butte 2 (NBO1 & NB2) coal bed natural gas (CBNG) applications for permit to drill (APDs) in a plan of development (POD). Williams proposes to drill, complete, and equip 2 CBNG wells in the NBO1 POD and 5 CBNG wells in the NB2 POD, shown in the well list below. The target coal zone is the Big George at an average depth of 1,606 feet below the surface. The project area, located in Campbell County, Wyoming, lies within all or portions of Sections: 33 and 34 of T45N, R76W and within all or portions of Sections: 3, 4, 9, and 10 of T44N, R76W. The surface landowner is John Christensen. The NBO1 & NB2 PODs refer to the Powder River Basin Gas Project Final Environmental Impact Statement (PRB FEIS)(2003) and the Culp Draw/Hartzog Draw Federal POD (WY-070-10-121, (approved May 27, 2010) – to which this project is contiguous. Williams will also use BLM and Wyoming Department of Environmental Quality (WDEQ) approved water management infrastructure from Williams’ adjacent approved PODs discussed in further detail below under the heading, Water Resources. Current land use in and around the project boundary is livestock grazing, ranching operations, existing federal and fee CBNG development and uranium mining. Williams planned this project with input from the landowner in order to minimize surface disturbance and limit the environmental impact of the development, while providing benefit to the landowner. Where feasible, gas and water pipelines, and electrical cables will be installed in common trenches, ideally within access roadways. This minimizes surface disturbance and creates less impact on the landscape. The mileage for both corridors and access roads without pipe and utility lines is provided on the Surface Use Data Summary (SUDS) Form and discussed below.

**Proposed NBO1 and NB2 Well List:**

WELL NAME	WELL #	TWN	RNG	SEC	QQ	LEASE
N BUTTE OBLI 1 J CHRISTENSEN	14-4*	44N	76W	4	SWSW	WYW144533
N BUTTE OBLI 1 J CHRISTENSEN	23-4	44N	76W	4	NESW	WYW128617
NORTH BUTTE 2 J CHRISTENSEN	12-3*	44N	76W	3	SWNW	WYW135916
NORTH BUTTE 2 J CHRISTENSEN	21-3	44N	76W	3	NENW	WYW135916
NORTH BUTTE 2 J CHRISTENSEN	32-3	44N	76W	3	SWNE	WYW144534
NORTH BUTTE 2 J CHRISTENSEN	12-4	44N	76W	4	SWNW	WYW150385
NORTH BUTTE 2 J CHRISTENSEN	32-4	44N	76W	4	SWNE	WYW150385

\* POD AFMSS Master Well

**Plan Conformance**

The proposed project conforms to the terms and the conditions of the Resource Management Plan (RMP) for the public lands administered by the Bureau of Land Management, Buffalo Field Office (BFO), 1985, amended 2001 and 2003, and Interior Department Order 3310. The impacts were adequately analyzed in Final Environmental Impact Statements (FEISs) 1985 and 2003, as required by 43 CFR 1610.5. The surface in this project is clearly lacking wilderness characteristics since there are no federal surface acres.

BFO determined the project is statutorily categorically excluded from National Environmental Policy Act (NEPA) detailed documentation according to Section 390 of the National Energy Policy Act of 2005.

The applicable categorical exclusion from the Energy Policy Act of 2005 is exclusion number (b)(1) which is *individual surface disturbances of less than 5 acres so long as the total surface disturbance on the lease is not greater than 150 acres and site-specific analysis in a document prepared pursuant to NEPA has been previously completed.*

There are 3 requirements for a Section 390 Categorical Exclusion 1 (BLM NEPA Handbook, Appdx. 2):

- 1) The project must disturb less than 5 acres on the site. If more than one action is proposed for a lease (for example, 2 or more wells), each activity is counted separately and each may disturb up to 5 acres. William’s combined proposal to drill and equip 7 CBNG wells, over 5 federal leases, was designed to minimize impacts as much as possible. As described in the submitted NBO1 & NB2 Mitigation Report, wells were originally staked at or as close to the center of the 200 foot drilling window in the stand-up 80 acre spacing unit as possible. During planning activities, Williams moved several locations off of center to avoid wildlife habitat, steep topography, or to move the location closer to existing infrastructure in an effort to minimize disturbance. During the onsite visit, it was determined that well, North Butte 2 J Christensen Fed 12-4-4476, would require an engineered pad. During drilling, typical pad dimensions are 120 x 180 feet or 0.5 acres. The remaining 6 wells not requiring a pad will disturb less than 0.2 acres per location, during drilling. All wellhead facilities will be contained in a 6 x 6 x 6 foot insulated enclosure. The enclosure and control panel at each of the well locations will be fenced. The allowable disturbance for a CX1 is 5 acres per site. Here Williams proposes 7 sites for an allowable 35 acres of disturbance at the sites. This project calls for a total surface disturbance at the sites of 1.7 acres: 6 APDs x 0.2 acres (sub-total 1.2 acres); plus 0.5 acres for the final APD. The proposed surface disturbance is under the threshold for a CX1 so it complies with the first requirement.
  
- 2) The current unreclaimed surface disturbance readily visible on the entire leasehold must not be greater than 150 acres, per lease, including existing and proposed disturbance. The Existing Lease Disturbance table below shows the current unreclaimed surface disturbance readily visible, in acres, within the POD boundary. The leases involved with this project are: WYW150385, WYW135916, WYW144534, WYW128617, and WYW144533. Williams will develop 2 federal leases for 2 CBNG wells within the NBO1 POD and 3 federal leases for 5 CBNG wells within the NB2 POD. Williams submitted a combined Surface Use Data Summary (SUDS) Form. A portion is shown as a comparison in the Proposed Disturbance table below, that clearly describes the proposed action as well as a description of the existing affected environment. Proposed road disturbance within a corridor (roads and utilities) is 11.74 acres and not in a corridor is 5.88 acres. Existing roads within a proposed utility corridor is 14.56 acres. Other disturbance for overhead power (within the POD boundary), gathering/metering facilities and a staging area is 8.87 acres. The total amount of proposed disturbance is 41.05 acres. Existing road disturbance shown on the SUDS form (within the POD boundary) is 7.81 acres. There is existing uranium and CBNG development within the NB2 POD boundary; however, there are no other surface disturbances from a federal project on this leasehold. Therefore the unreclaimed surface disturbance readily visible on the entire leasehold is not greater than 150 acres, thus it complies with the second requirement.

\*Existing Lease Disturbance:

<b>LEASE</b>	<b>EXISTING</b>
WYW150385	10.78
WYW135916	2.23
WYW144534	8.64
WYW128617	10.14
WYW144533	8.41
<b>TOTAL EXISTING</b>	<b>40.2 ac</b>

\*Proposed Disturbance:

<b>ACTION</b>	<b>PROPOSED</b>
New road disturbance within a corridor (roads and utilities)	11.74
New road disturbance not within a corridor (roads and utilities)	5.88
New utility corridor within existing roads	14.56
Other disturbance within the POD boundary	8.87
<b>TOTAL PROPOSED</b>	<b>41.05 ac</b>

- 3) There must be a site-specific NEPA document (not just leasing) that covers the boundaries of the proposed project. This NEPA document may be an exploration or development EA/EIS; it may be part of a specific master development plan, a multi-well EA/EIS, or an individual permit approval EA/EIS. The NEPA document must have analyzed the type of activity or project being considered; yet it need not have addressed the specific permit or application being considered. The NBO1 & NB2 PODs refer to the PRB FEIS (2003) and the Culp Draw/Hartzog Draw Federal POD (WY-070-EA10-121, May 27, 2010). The general location of NBO1 & NB2 PODs lies entirely within the upper reaches of ephemeral tributaries of the Willow Creek watershed. Directly north and downstream of the project area are 7 PODs whose boundaries are completely adjacent to one another. The 7 affected PODs, listed in Table 1 and shown in Figure 1 below, are discussed herein this document as approved PODs. Each of the approved PODs has been individually and extensively analyzed prior to approval. For more information and detail of the approved PODs, see each individual POD and approved EA listed in Table 1. All the approved PODs have related infrastructure and share common water management strategies. The PRB FEIS analyzed foreseeable oil and coalbed natural gas development in the PRB. The foreseeable development included drilling a CBNG well on 80 acre spacing resulting in approximately 51,000 CBNG wells and their infrastructure, in the PRB. This proposed development described falls within the foreseeable development scenario that was analyzed in the referred NEPA documents required to use a CX1.

### **Plan of Operations**

The proposal design conforms to all BLM standards and incorporates appropriate best management practices, required and design mitigation measures determined to reduce the effects on the environment. BFO reviewed a surface use plan (SUP) of operations which described all proposed surface-disturbing activities and approves the SUP pursuant to Section 17 of the Mineral Leasing Act, as amended.

### **Water Resources**

Williams proposes that produced water will be completely contained and piped to a pump station associated with and analyzed in the Hartzog Draw Federal POD. Williams will also use BLM and WDEQ (discharge permit WY0054593) approved water management infrastructure within Williams' adjacent approved PODs. The pump station, located in SWSE Sec. 8 T45N R76W and associated with the approved Culp Draw/Hartzog Draw Federal POD (WY-070-10-121), will assist in the transport of produced water from the NBO1 and NB2 POD. Effluent from the Culp Draw/Hartzog Draw Federal POD may be disposed of in a multiple of ways within the POD as well as directed to additional approved PODs. The approved PODs have a combined 41 outfalls and associated impoundments, 4 direct discharges on Pumpkin Creek, land application and injection as alternatives for approved water management strategy options – all giving William's flexibility in managing federally produced waters.

The production of CBNG necessitates the removal of some degree of the water saturation in the coal zones to temporarily reduce the hydraulic head in the coal. The Buffalo Field Office has been monitoring coal zone pressures as expressed in depth to water from surface since the early 1990's in the PRB. In addition to the coal zone, at many locations there are monitor wells installed to the Wasatch sand zone

located above the target coal. These wells monitor water levels in the sand aquifer simultaneously with the coal zone to ascertain if there is a hydraulic connection between the coal and the sand.

As a result of CBNG production, the target coal zone pressure may have been reduced through off set water production. The Pistol Point Groundwater monitor well (NENW Sec 31 T45N R75W) which is located 2.4 miles east of the POD boundary, was completed in the Big George coal zone (TD 1559') in 1998.

The initial water level of the Big George Coal was recorded between at 456 feet below ground level prior to the majority of drilling and production in the area. The most recent measurements, dated June, 2010 the water level was measured at 1269 feet below ground level, for a decrease of 813 feet.

For additional information, please refer to the PRB FEIS Chapter 4 Groundwater and the Wyoming State Geological Survey's Open File Report 2009-10 titled "1993-2006 Coalbed Natural Gas (CBNG) Regional Groundwater Monitoring Report: Powder River Basin, Wyoming" which is available on their website at <http://www.wsgs.uwyo.edu>.

The average NBO1 and NB2 pumping rate will be 14.5 gallons per minute (gpm) per well or 102 gpm for the 7 wells outlined in the proposed plan. This rate is based on planned production rates and historic initial production rates from the wells completed to the proposed target formations located within the approved PODs. The production rate of 102 gpm represents a maximum case scenario where all wells are completed and activated simultaneously. However, due to drilling schedules, permitting timelines, and operator schedules, drilling and production of all wells would occur over approximately a 3 year time frame. This would allow for localized declines of effluent production in the project area. For additional information, maps and detailed analysis on production rates, water balance, and water management infrastructure see the associated Water Management Plans (WMP) in the individual approved PODs.

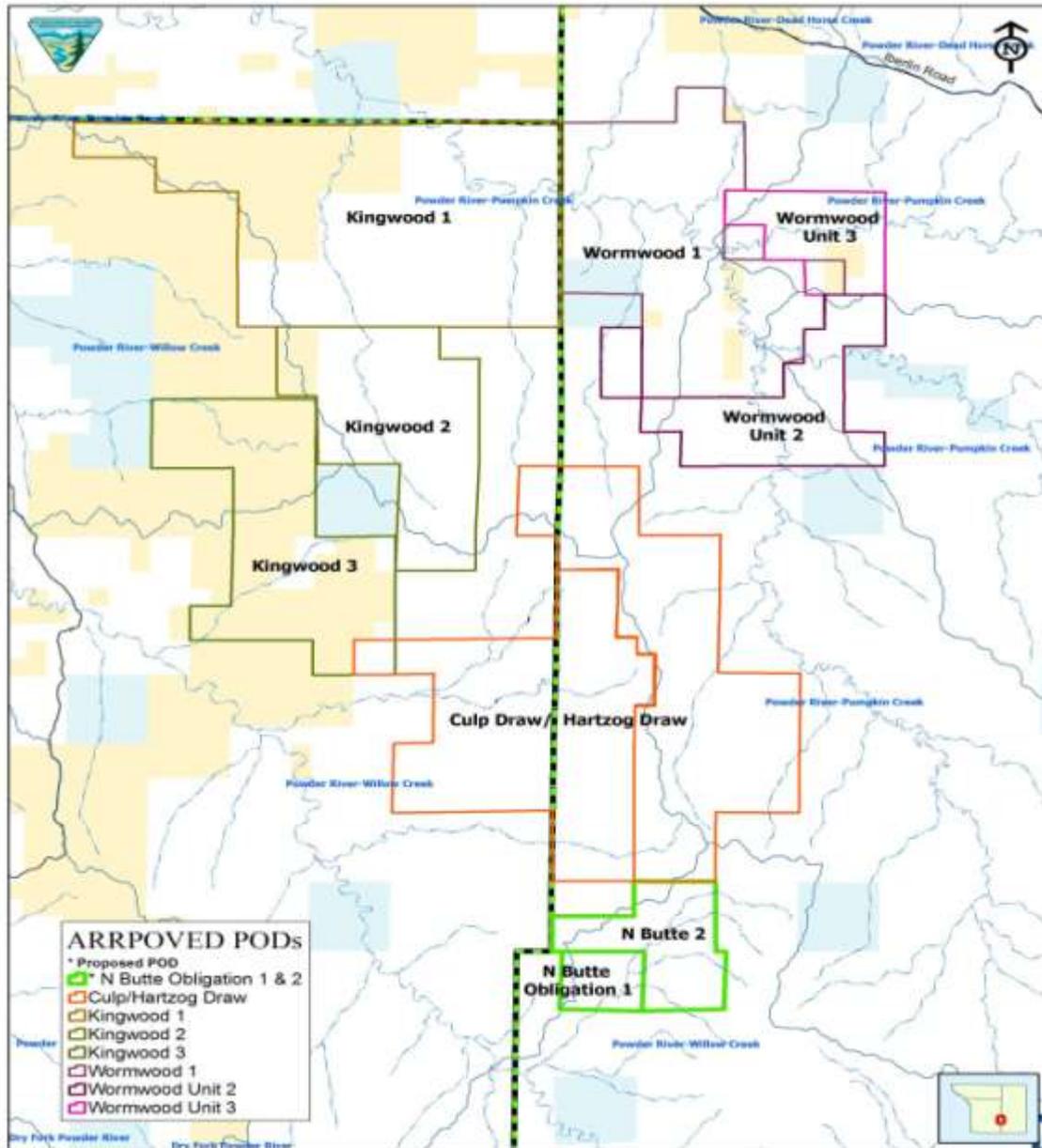
The new water management infrastructure associated with NBO1 and NB2 will be water collection and delivery pipelines which will be tied into the adjacent Hartzog Draw Federal POD. Produced effluent from NBO1 and NB2 may be directed to any of the approved PODs. For these PODs, there were over 40 water discharge points with associated impoundments, direct discharge as well as land application and injection well disposal locations analyzed for water management from the 281 approved wells. For CBNG production, water production begins at the highest rate and declines significantly as gas production increases within the first year of production. Water production from wells in the surrounding PODs was estimated to be 14.5 to 20 gpm per well (12,657 gpm total). According to the Wyoming Oil and Gas Conservation Commission production records on the website, initial production from this area ranges from 10 to 28 gpm per well. That rate has decreased to between 2 and 8 gpm by the third year of production. The water management system for these PODs was designed to be able to handle the maximum volume of produced water. That rate has decline by as much as 90%. The addition of the water produced from this project (102 gpm) can easily be assimilated into the existing infrastructure which was designed to handle over 12,000 gpm.

**Table 1: Approved PODs**

Approved POD	EA NUMBER	Date Approved	Number of Wells
Culp Draw/Hartzog Draw	WY-070-10-121	5/27/2010	53
Kingwood 1	WY-070-06-210	9/29/2006	71
Kingwood 2	WY-070-07-143	7/27/2007	37
Kingwood 3	WY-070-09-148	9/29/2009	33
Wormwood 1	WY-070-06-104	7/28/2006	48
Wormwood 2	WY-070-11-56	12/21/2010	26

Approved POD	EA NUMBER	Date Approved	Number of Wells
Wormwood 3	WY-070-09-068	8/3/2009	13

**Figure 1: Map of Approved PODs**



**Cultural Resources**

Williams performed a class III cultural resource inventory for the North Butte Obligation 1 and 2 PODs prior to on-the-ground project work (BFO project no. 70100021). A class III cultural resource inventory following the Archeology and Historic Preservation, Secretary of the Interior's Standards and Guidelines (48CFR190) and the *Wyoming State Historic Preservation Office Format, Guidelines, and Standards for Class II and III Reports* was provided to BFO by Williams Production RMT Co. Clint Crago, BLM Archaeologist, reviewed the report for technical adequacy and compliance with Bureau of Land

Management (BLM) standards, and determined it to be adequate. The following resources are located in or near the project area.

Site Number	Site Type	Eligibility
48CA268	Pumpkin Buttes TCP	Eligible
48CA2366	Prehistoric Lithic Scatter	Not Eligible
48CA2367	Prehistoric Lithic Scatter	Not Eligible
48CA6214	Black and Yellow Trail, Sussex Variant	Not Eligible
48CA7010	Prehistoric Lithic Scatter	Not Eligible
48CA7011	Prehistoric Lithic Scatter	Not Eligible
48CA7012	Prehistoric Stone Circle Site and Lithic Scatter	Eligible
48CA7055	Prehistoric Lithic Scatter and Historic Can Scatter	Not Eligible

Not eligible sites 48CA6214 and 48CA7055 will be impacted by the proposed project. The Pumpkin Buttes (48CA268) are near the project area and are a traditional cultural property (TCP) which retains its setting as an important aspect of its integrity. There will be no physical impacts to the TCP. The setting of the TCP will be impacted by the proposed project, however these impacts will be mitigated through application of mitigation measures described in the, Programmatic Agreement Between the Bureau Of Land Management and the Wyoming State Historic Preservation Officer Regarding Mitigation of Adverse Effects to the Pumpkin Buttes Traditional Cultural Property from Anticipated Federal Minerals Development, Campbell County, Wyoming; Appendices A-G. These mitigation measures incorporate standard BMPs to reduce visual contrast and will be incorporated during all phases (drilling, construction, operation, reclamation, etc) of all wells and their associated infrastructure (new surface disturbance to junction with existing disturbance).

Following the Wyoming State Protocol Section VI(B)(1) the BLM electronically notified the Wyoming State Historic Preservation Officer (SHPO) on July 15, 2011 of a finding of No Adverse Effect. If any cultural values [sites, artifacts, human remains (Appendix L PRB FEIS)] are observed during operation of this lease/permit/right-of-way, they will be left intact and the Buffalo Field Manager notified. Further discovery procedures are explained in the Standard COA (General)(A)(1).

### Wildlife Resources

The wildlife biologist has reviewed the proposal and determined that the project along with the COAs is consistent with the Final Environmental Impact Statement (WY-070-EA02-065) and the programmatic biological opinion (ES-6-WY-02-F006) from the Powder River Basin Oil and Gas Project. Impacts to wildlife resources in the NBO1 & NB2 PODs have been adequately analyzed in the overlapping Culp Draw/Hartzog Draw EA.

### Persons and Agencies Consulted

Name	Company/Agency	Title
Ray Stott	BLM	NRS/Hydrology
Don Brewer	BLM	Wildlife Biologist
Pat Cole	BLM	Wildlife Biologist
Clint Crago	BLM	Archaeologist

<b>Name</b>	<b>Company/Agency</b>	<b>Title</b>
Stacy Gunderson	BLM	Civil Engineer
Randee Jaspersen	Williams Production RMT	Landman
Randy Materi	Williams Production RMT	Construction
Duane Joslyn	Williams Production RMT	Construction
Charlie Bolerjack	Williams Production RMT	Operations Supt.
Rex Lynde	Williams Production RMT	Drilling Supervisor
Jerry Means	Magna	Dirt Work Contractor
Josh Johnson	Bighorn Surveying Eng.	Engineer
Jenna Foss	Grouse Mtn. Env. Consultant	Project Manager
Bill Bellah	Grouse Mtn. Env. Consultant	Hydrologist
Patrick Barker	Western Land Service	Project Manager
John Christensen	Landowner	Landowner
Mary Hopkins	Wyoming SHPO	WY State Historic Preservation Office

**Decision and Rationale on Action**

I approve the North Butte Obligation 1 and North Butte 2 APDs and POD(s) using the following rationale and conditions of approval (COAs):

**SITE SPECIFIC**

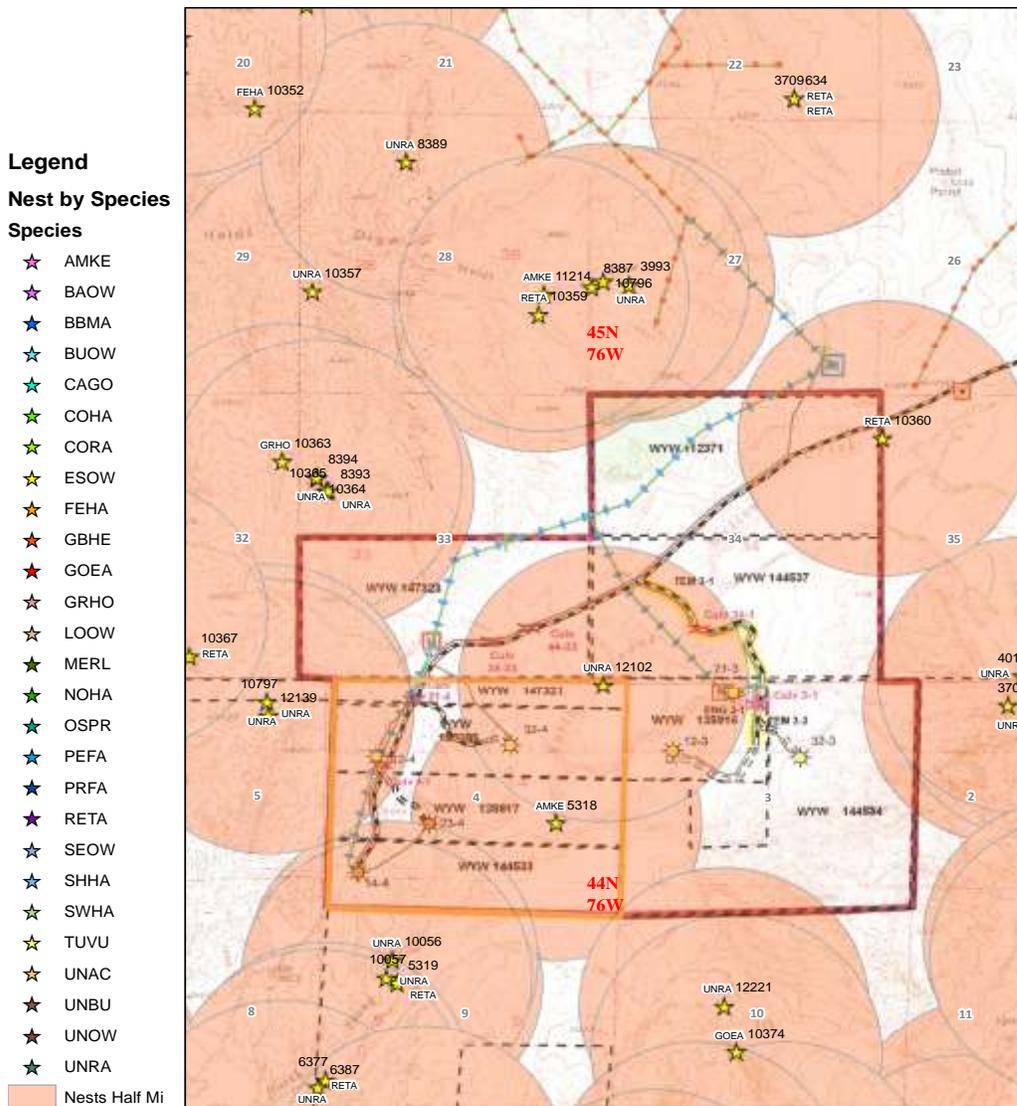
1. The operator is required to comply with all applicable plans and COAs outlined in the Culp Draw/Hartzog Draw Federal POD (WY-070-10-121, approved 5/27/2010) and associated APPROVED PODS.
2. Mitigation measures outlined in the, Programmatic Agreement Between the Bureau Of Land Management and the Wyoming State Historic Preservation Officer Regarding Mitigation of Adverse Effects to the Pumpkin Buttes Traditional Cultural Property from Anticipated Federal Minerals Development Campbell County, Wyoming; Mitigation measures described in Appendices A-G must be followed to reduce the effects to the setting of the Pumpkin Buttes TCP. These mitigation measures incorporate standard BMPs to reduce visual contrast and will be incorporated during all phases (drilling, construction, operation, reclamation, etc) of all wells and their associated infrastructure (new surface disturbance to junction with existing disturbance).
3. Well 23-4-4476; maintain a 20 foot vegetative buffer from the headcut approaching the location and the drainage adjacent to the location.
4. Where the waterline crosses the channel (NE section 34 T45N R76W) to tie into the pump station, apply stabilization measures within 30 days of construction to prevent accelerated erosion, due to channel morphology.
5. In addition to the mitigation measures outlined in Site Specific Item #2 above, apply stabilization measures into and out of the channel at the ENG 3-1 crossing due to the road grade and channel morphology.
6. The operator will provide georeferenced special data depicting as-built locations of all facilities, wells, roads, pipelines, power lines, reservoirs, discharge points, and other related facilities to the BLM.
7. All engineered roads, well locations, staging areas and facilities will be properly staked and identified prior to the pre-construction onsite.

8. The color scheme selected for the North Butte Obligation 1 & North Butte 2 POD is Covert Green and Carlsbad Canyon.

### Raptors

The following conditions will alleviate impacts to raptors:

1. No surface disturbing activity shall occur within 0.5 mile of all raptor nests depicted in the map below, from February 1 through July 31, annually, prior to a raptor nest occupancy survey.



- a. Surveys to document nest occupancy shall be conducted by a biologist, following the most current BLM protocol, between April 15 and June 30. All survey results shall be submitted in writing to a Buffalo BLM biologist and approved prior to surface disturbing activities. A 0.5 mile timing restriction will be applied if a nest is identified as active.
- b. Surveys for new raptor nests shall be conducted during the construction phase of the project and 5 years following completion of the project within the POD. Surveys shall occur throughout the

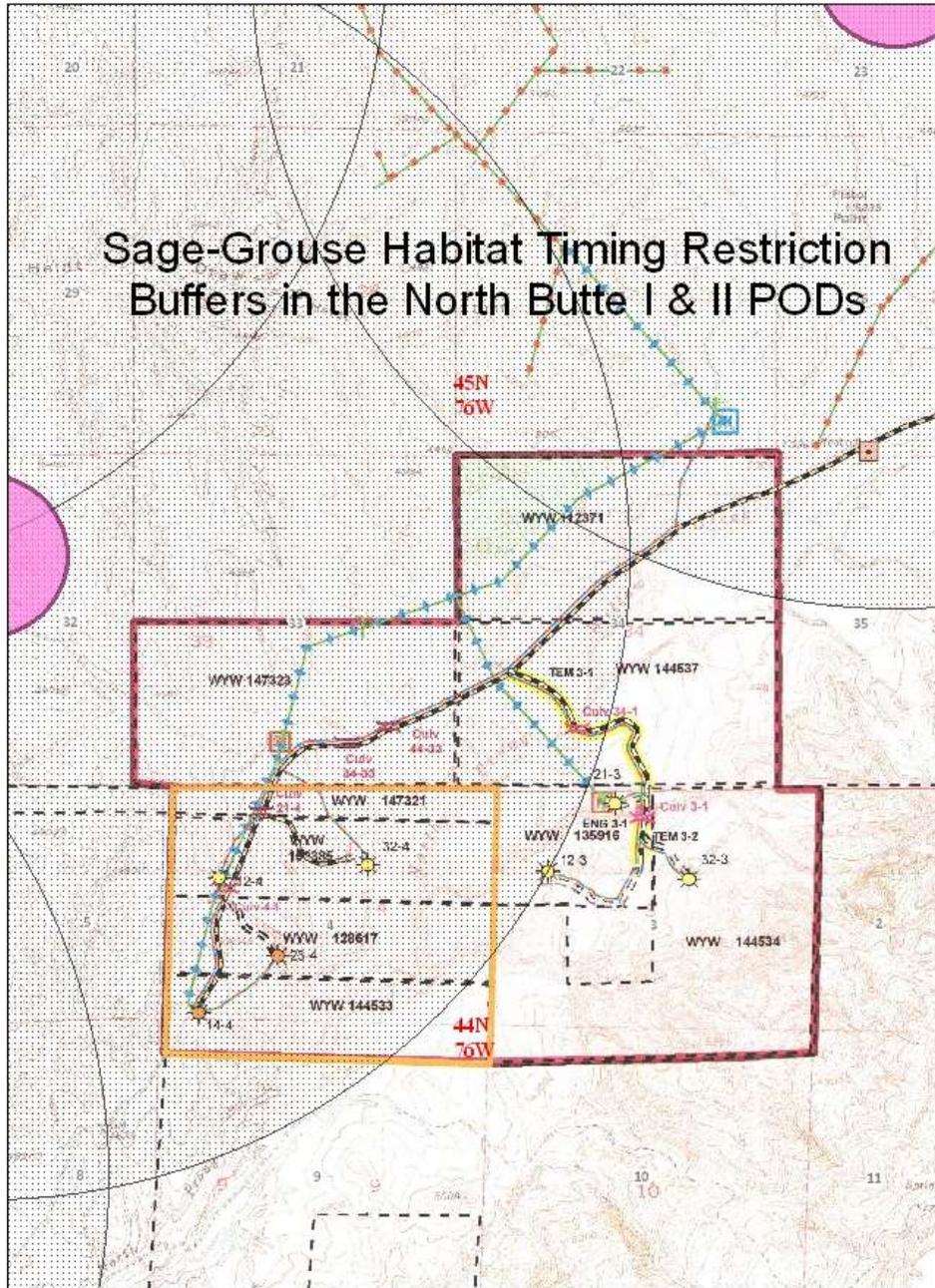
entire POD and 0.5 mile outside of the POD boundary between April 15 and June 30, and prior to or during the first nest occupancy check. A seasonal timing restriction (February 1 through July 31) will be added to surface disturbing activities within 0.5 miles of any newly discovered nests.

- c. If an undocumented raptor nest is located during project construction or operation, the Buffalo Field Office (307-684-1100) shall be notified within 24 hours.

**Sage Grouse**

- 1. No surface disturbing activities are permitted during sage-grouse breeding and nesting periods (March 15 – June 30), for project components located in the sage-grouse habitat timing restriction buffers. This condition will be implemented on an annual basis for the duration of surface disturbing activities.

# Sage-Grouse Habitat Timing Restriction Buffers in the North Butte I & II PODs



2. A sage-grouse survey will be conducted by a biologist following the most current WGFD protocol. All survey results shall be submitted in writing to a Buffalo BLM biologist no later than July 31 of the current year. This condition will be implemented on an annual basis for the duration of surface disturbing activities.
  - a. If a previously unknown lek is identified during surveys (April 1-May 7), a Buffalo BLM biologist shall be notified.

### **Mountain Plover**

The following conditions will alleviate impacts to mountain plovers:

1. No surface-disturbing activities shall occur within 0.25 mile of potential mountain plover nesting habitat, annually, from 15 March through 31 July, prior to a nesting survey. This timing limitation will be in effect unless surveys determine the habitat to be unoccupied. This applies to the prairie dog towns in T45N, R76W Sections 33 and 34; and T44N, R76W Section 4.
  - a. Mountain plover nesting surveys shall be conducted by a biologist following the most current USFWS Mountain Plover Survey Guidelines. All survey results shall be submitted in writing to a Buffalo BLM biologist and approved prior to surface disturbing activities.
  - b. If a plover is observed, no surface-disturbing activities shall occur within 0.25 miles of the prairie dog colony from 15 March through 31 July.
  - c. No dogs will be permitted at work sites to reduce the potential for harassment of mountain plovers.

### **STANDARD**

#### **General**

1. A pre-construction field meeting shall be conducted prior to beginning any dirt work approved under this POD. The operator shall contact the BLM Authorized Officer, Ray Stott, at 307.684.1179 at least 4-days prior to beginning operations so that the meeting can be scheduled. The operator is responsible for having all contractors present (dirt contractors, drilling contractor, pipeline contractor, project oversight personnel, etc.) including the overall field operations superintendent, and for providing all contractors copies of the approved POD, project map and BLM Conditions of Approval pertinent to the work that each will be doing.
2. If any cultural values [sites, artifacts, human remains (Appendix L FEIS)] are observed during operation of this lease/permit/right-of-way, they will be left intact and the Buffalo Field Manager notified. The authorized officer will conduct an evaluation of the cultural values to establish appropriate mitigation, salvage or treatment. The operator 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. If historic or archaeological materials are uncovered during construction, the operator is to immediately stop work that might further disturb such materials, and contact the authorized BLM officer (AO). Within five working days the AO will inform the operator as to:
  - whether the materials appear eligible for the National Register of Historic Places;
  - the mitigation measures the operator will likely have to undertake before the site can be used (assuming in situ preservation is not necessary); and,
  - a time-frame for the AO to complete an expedited review under 36 CFR 800.11 to confirm, through the State Historic Preservation Officer, that the findings of the AO are correct and that mitigation is appropriate. The AO will provide technical and procedural guidelines for the conduct of mitigation. Upon verification from the AO that the required mitigation has been completed, the operator will then be allowed to resume construction measures.

3. If paleontological resources, either large or conspicuous, and/or a significant scientific value are discovered during construction, the find will be reported to the Authorized Officer immediately. Construction will be suspended within 250 feet of said find. An evaluation of the paleontological discovery will be made by a BLM approved professional paleontologist within five (5) working days, weather permitting, to determine the appropriate action(s) to prevent the potential loss of any significant paleontological values. Operations within 250 feet of such a discovery will not be resumed until written authorization to proceed is issued by the Authorized Officer. The applicant will bear the cost of any required paleontological appraisals, surface collection of fossils, or salvage of any large conspicuous fossils of significant scientific interest discovered during the operation.
4. Please contact Ray Stott, Natural Resource Specialist, at (307) 684-1179, Bureau of Land Management, Buffalo, if there are any questions concerning the following surface use COAs.
5. The first well drilled to each targeted coal zone will be designated as the POD reference well. Designated reference wells must have the ability to be sampled at the wellhead. Water quality samples will be collected by the operator and submitted for analysis using WDEQ NPDES criteria within 30-60 days of initial water production. Results of the analysis will be submitted to the BFO-BLM Authorized Officer as soon as they become available.

#### **DRILLING AND PRODUCTION OPERATIONS**

1. The operator shall complete wells (case, cement and under ream) as soon as possible, but no later than 30 days after drilling operations, unless an extension is given by the BLM Authorized Officer.
2. If in the process of air drilling the wells there is a need to utilize 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 of overflow. Fluid and cuttings will not be squeezed out of the pit, and the pit will be reclaimed in an expedient manner.

#### **Well Control Equipment**

1. The flow line shall be a minimum of 30 feet from the well bore and securely anchored. The 30-foot length of line is a minimum and operators must make consideration for increasing this length for topography and/or wind direction.
2. The flow line shall be a straight run.
3. The flow line must be constructed from non-flammable material.
4. All cuttings and circulating medium shall be directed to and contained in a reserve pit.
5. The nearest edge of the pits shall be a minimum of 25' from the rig.
6. A minimum of 2' of freeboard shall be maintained in the pits at all times.
7. Verbal notification shall be given to the Authorized Officer at least 24 hours before formation tests, BOP tests, running and cementing casing, and drilling over lease expiration dates.

#### **Cement Program**

1. If there are indications of inadequate primary cementing of the surface, intermediate, or production casing strings; such as but not limited to no returns to surface, cement channeling, fallback or

mechanical failure of equipment, the operator will evaluate the adequacy of the cementing operations. This evaluation will consist of running a cement bond log (CBL) or an alternate method approved by the Authorized Officer (AO) no sooner than 12 hours and no later than 24 hours from the time the cement was first pumped.

2. If the evaluation indicates inadequate cementing, the operator shall contact a BLM Buffalo Field Office Petroleum Engineer for approval of remedial cementing work.
3. The adequacy of the remedial cementing operations shall be verified by a cement bond log (CBL) or an alternate method approved by the Authorized Officer (AO). All remedial work shall be completed and verified prior to drilling out the casing shoe or perforating the casing for purposes other than remedial cementing.
4. The cement mix water used must be of the same water quality used to develop the cement program.

#### **Production Equipment**

1. Other actions such as off-lease measurement, commingling, allocation, etc. shall be approved via a Notice of Intent sundry (Form No. 3160-5). Submission of additional information in the POD shall not be construed as permission for these items. If the operator wishes to utilize off-lease gas measurement for wells approved in this POD, they are required to obtain approval via a Notice of Intent sundry (Form No. 3160-5) prior to any gas production.

#### **Well and POD Building Identification**

1. From the time a well pad is constructed or a well is spudded (if no well pad needed), until abandonment, all well locations must be properly identified with a legible sign. The sign will include the well name and number, operator name, lease number, and the surveyed location.
2. At each POD building site where federal wells are metered, the operator is required to maintain a legible sign displayed in a conspicuous place. This sign is required to be in place at the time metering goes online. The sign shall include: POD name, Operator, Federal well names and numbers, Federal lease numbers being metered at the POD building, and surveyed location of the building.

#### **Protection of Fresh Water Resources**

1. All oil and gas operations shall be conducted in a manner to prevent the pollution of all freshwater resources. All fresh waters and waters of present or probable future value for domestic, municipal, commercial, stock or agricultural purposes will be confined to their respective strata and shall be adequately protected. Special precautions will be taken to guard against any loss of artesian water from the strata in which it occurs and the contamination of fresh water by objectionable water, oil, condensate, gas or other deleterious substance to such fresh water.

#### **Miscellaneous Conditions**

1. Any changes to the approved drilling plan and/or these conditions of approval shall be approved by the BLM-Buffalo Field Office Petroleum Engineer prior to being implemented.

After hour's numbers:

Supervisory Petroleum Engineer: Matthew Warren      Cell Telephone: 307-620-0103

2. If any cores are collected, a copy of all analysis performed shall be submitted to the BLM-Buffalo Field Office Petroleum Engineer.

## **SURFACE USE STANDARD**

### **A. Construction**

1. Construction and drilling activity will not be conducted using frozen or saturated soil material during periods when watershed damage or excessive rutting is likely to occur.
2. Remove all available topsoil from constructed well locations including areas of cut and fill, and stockpile at the site. Topsoil will also be salvaged for use in reclamation on all other areas of surface disturbance (roads, pipelines, etc.). Clearly segregate topsoil from excess spoil material. Any topsoil stockpiled for one year or longer will be signed and stabilized with annual ryegrass or other suitable cover crop.
3. The operator 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 impede watershed and drainage flows.
4. Construct the backslope no steeper than ½:1, and construct the foreslope no steeper than 2:1, unless otherwise directed by the BLM Authorized Officer.
5. Maintain a minimum 20-foot undisturbed vegetative border between toe-of-fill of pad and/or pit areas and the edge of adjacent drainages, unless otherwise directed by the BLM Authorized Officer.
6. 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 (2006).
7. The reserve pit will be oriented to prevent collection of surface runoff. After the drilling rig is removed, the operator 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.
8. The reserve pit will be lined with an impermeable liner if permeable subsurface material is encountered. An impermeable liner is any liner having 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.
9. The reserve pit will be constructed so that at least half of its total volume is in solid cut material (below natural ground level).
10. 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, in lieu of more stringent requirements by the surface owner, is defined as follows:
  - 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. Electric fences will not be allowed.
  - 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 securely into posts and one another using fence staples, clamps, etc. Plastic snow fencing must be taut and sturdy. Fence must be at least 2-feet from edge of pit. 3 sides fenced before

beginning drilling, the fourth side fenced immediately upon completion of drilling and prior to rig release. Fence must be left up and maintained in adequate condition until pit is closed.

11. Reserve pits will be closed as soon as possible, but no later than 90 days from time of drilling/well completion, unless the BLM Authorized Officer gives an extension. 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 prior to backfilling, recontouring and replacement of topsoil. Mud and cuttings left in pit must be buried at least 3-feet below recontoured grade. The operator will be responsible for recontouring any subsidence areas that develop from closing a pit before it is sufficiently dry.
12. 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.
13. The minimum diameter for culverts will be 18 inches. However, all culverts will be appropriately sized in accordance with standards in BLM Manual 9113.
14. Construction and other project-related traffic will be restricted to approved routes. Cross-country vehicle travel will not be allowed.
15. Maximum design speed on all Operator constructed and maintained roads will not exceed 25 miles per hour.
16. 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.
17. Pipeline trenches shall be compacted during backfilling. Pipeline trenches shall be routinely inspected and maintained to ensure proper settling, stabilization and reclamation.
18. 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 suppressants, and water) will be used as necessary on unpaved roads that present a fugitive dust problem. The use of chemical dust suppressants on public surface will require prior approval from the BLM Authorized Officer.
19. Operators are required to obtain a National Pollution Discharge Elimination System (NPDES) Storm Water Permit from the Wyoming DEQ for any projects that disturb five or more acres (changing to one acre in March 2005). This general construction storm water permit must be obtained from WDEQ prior to any surface disturbing activities and can be obtained by following directions on the WDEQ website at <http://deq.state.wy.us>. Further information can be obtained by contacting Barb Sahl at (307) 777-7570.
20. The operator shall submit a Sundry Notice (Form 3160-5) to BLM for approval prior to construction of any new surface disturbing activities that are not specifically addressed in the approved APD or POD Surface Use Plan.

#### **B. Operations/Maintenance**

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

2. 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. Operators and their contractors will comply with all state and local laws and regulations pertaining to disposal of human and solid waste.
3. The operator 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 Federal and State laws. Pesticides shall be used only in accordance with their registered uses and within limitations imposed by the Secretary of Interior. Prior to the use of pesticides on public land, the holder shall obtain from the BLM authorized officer written approval of a plan showing the type and quantity of material to be used, pest(s) to be controlled, method of application, location of storage and disposal of containers, and any other information deemed necessary by the authorized officer to such use.
4. 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 which simulates "Standard Environmental Colors." The color selected for the North Butte Obligation 1 & North Butte 2 POD, is Covert Green and Carlsbad Canyon.
5. Sewage shall be placed in a self-contained, chemically treated porta-potty on location.
6. The operator and their contractors shall ensure that all use, production, storage, transport and disposal of hazardous and extremely hazardous materials associated with the drilling, completion and production of these wells will be in accordance with all applicable existing or 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, completion and production operations.
7. Produced fluids shall be put in test tanks on location during completion work. Produced water will be put in the reserve pit during completion work per Onshore Order #7.
8. The only fluids/waste materials which are authorized to go into the reserve pit are RCRA exempt exploration and production wastes. These include:
  - drilling muds & cuttings
  - rigwash
  - excess cement and certain completion & stimulation fluids defined by EPA as exempt
 It does not include drilling rig waste, such as:
  - spent hydraulic fluids
  - used engine oil
  - used oil filter
  - empty cement, drilling mud, or other product sacks
  - empty paint, pipe dope, chemical or other product containers
  - excess chemicals or chemical rinsate

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

9. The operator 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.).

### **C. Producing Well**

1. 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 re-contouring pit area. The operator will be responsible for re-contouring and reseeding of any subsidence areas that develop from closing a pit before it is completely dry.
2. Reduce the backslope to 2:1 and the foreslope to 3:1, unless otherwise directed by the BLM Authorized Officer. Reduce slopes by pulling fill material up from foreslope into the toe of cut slopes.
3. Any spilled or leaked oil, produced water or treatment chemicals must be reported in accordance with NTL-3A and immediately cleaned up in accordance with BLM requirements. This includes clean-up and proper disposition of soils contaminated as a result of such spills/leaks.
4. Distribute stockpiled topsoil evenly over those areas not required for production (ie., cut/fill slopes, road ditches, pipelines, etc.) and reseed with approved seed mix.
5. Upgrade and maintain access roads and drainage control (e.g., culverts, drainage dips, ditching, crowning, surfacing, etc.) as necessary and as directed by the BLM Authorized Officer to prevent soil erosion and accommodate safe, environmentally-sound access.
6. Prior to construction of production facilities not specifically addressed in the APD/POD, the operator shall submit a Sundry Notice to the BLM Authorized Officer for approval.
7. Waterbars shall be installed on all reclaimed pipeline corridors per the guidelines in A.4.2.4 #6.

### **D. Reclamation/Dry Hole**

1. 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 COAs.
2. Disturbed lands will be re-contoured back to conform with existing undisturbed topography. No depressions will be left that trap water or form ponds.
3. The fluids and mud must be dry in the reserve pit before re-contouring pit area. The operator will be responsible for re-contouring of any subsidence areas that develop from closing a pit before it is completely dry. The plastic pit liner (if any) will be cut off below grade and properly disposed of at a state authorized landfill before beginning to re-contour the site.
4. Before the location has been reshaped and prior to redistributing the topsoil, the operator will rip or scarify the drilling area and access road on the contour, to a depth of at least 12 inches. The rippers are to be no farther than 24 inches apart.
5. Distribute the topsoil evenly over the entire location and other disturbed areas. Prepare the seedbed by disking following the contour.
6. Waterbars are to be constructed at least one (1) foot deep, on the contour with approximately two (2) feet of drop per 100 feet of waterbar to ensure drainage, and extended into established vegetation. All waterbars are to be constructed with the 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:

<b>Slope (percent)</b>	<b>Spacing Interval (feet)</b>
< 2	200
2 - 4	100
4 - 5	75
> 5	50

7. BLM will not release the performance bond until the area has been successfully revegetated (evaluation will be made after the second complete growing season) and has met all other reclamation goals of the surface owner and surface management agency.
8. A Notice of Intent to Abandon and a Subsequent Report of Abandonment must be submitted for abandonment approval.
9. For performance bond release approval, a Final Abandonment Notice (with a surface owner release letter on split-estate) must be submitted prior to a final abandonment evaluation by BLM.
10. Phased reclamation plans will be submitted to BLM for approval prior to individual POD facility abandonment via a Notice of Intent (NOI) Sundry Notice. Individual facilities, such as well locations, pipelines, discharge points, impoundments, etc. need to be addressed in these plans as they are no longer needed. Individual items that will need to be addressed in reclamation plans include:
  - Pit closure (Close ASAP after suitably dry, but no later than 90 days from time of drilling unless an extension is given by BLM Authorized Officer.) BLM may require closure prior to 90 days in some cases due to land use or environmental concerns.
  - Configuration of reshaped topography, drainage systems, and other surface manipulations
  - Waste disposal
  - Revegetation methods, including specific seed mix (pounds pure live seed/acre) and soil treatments (seedbed preparation, fertilization, mulching, etc.). On private surface, the landowner should be consulted for the specific seed mix.
  - Other practices that will be used to reclaim and stabilize all disturbed areas, such as water bars, erosion fabric, hydro-mulching, etc.
  - An estimate of the timetables for beginning and completing various reclamation operations relative to weather and local land uses.
  - Methods and measures that will be used to control noxious weeds, addressing both ingress and egress to the individual well or POD.
  - Decommissioning/removal of all surface facilities
  - Closure and reclamation of areas utilized or impacted by produced CBM water, including discharge points, reservoirs, off-channel pits, land application areas, livestock/wildlife watering facilities, surface discharge stream channels, etc.
11. Soil fertility testing and the addition of soil amendments may be required to stabilize some disturbed lands.
12. Any mulch utilized for reclamation needs to be certified weed free.

The above COAs and/or terms and conditions provide justification for this decision and may not be segregated from project implementation without further NEPA review. In addition my review of the plan conformance statement and determined that the proposed project is in conformance with the applicable land use plan(s) and none of the extraordinary circumstances apply as described in Appendix 6 of the BLM NEPA Handbook. I reviewed the proposal to ensure the appropriate exclusion category as described in Section 390 of the Energy Policy Act of 2005 is applied correctly. I determined this project requires no further environmental analysis.

  
\_\_\_\_\_  
Duane W. Spencer  
Field Manager

9/14/11  
\_\_\_\_\_  
Date

**ADMINISTRATIVE APPEAL:** This decision is subject to administrative appeal in accord with 43 CFR 3165. Request for administrative appeal must include information required under 43 CFR 3165.3(b) (State Director Review), including all supporting documentation. Such a request must be filed in writing with the State Director, Bureau of Land Management, P.O. Box 1828, Cheyenne, Wyoming 82003, no later than 20 business days after this Decision Record is received or considered to have been received. Any party who is adversely affected by the State Director's decision may appeal that decision to the Interior Board of Land Appeals, as provided in 43 CFR 3165.4.

**Contact Person**

For additional information concerning this decision, contact:  
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307-684-1100