

CONDITIONS OF APPROVAL FOR THE APPLICATION
FOR PERMIT TO DRILL

Williams Production RMT Company, Cedar Draw Unit 3
ENVIRONMENTAL ASSESSMENT –WY-070-EA11-236
Bureau of Land Management, Buffalo Field Office

POD Name: Cedar Draw Unit 3

Operator Name: Williams Production RMT Company

Field Office: Buffalo Field Office
Address: 1425 Fort Street
Buffalo, Wyoming 82834

Office Telephone Number: 307-684-1100

List of Wells:

	Well Name	Well #	QTR	Sec	TWP	RNG	Lease #
1	CEDAR DRAW UNIT 3	24-6G	SESW	6	53N	75W	WYW143982
2	CEDAR DRAW UNIT 3	23-7WG	NWNW	7	53N	75W	WYW143982
3	CEDAR DRAW UNIT 3	34-7WG	SWSE	7	53N	75W	WYW143982
4	CEDAR DRAW UNIT 3	22-7G	SESW	7	53N	75W	WYW143982
5	CEDAR DRAW UNIT 3	24-7WG	SESW	7	53N	75W	WYW143982
6	CEDAR DRAW UNIT 3	31-7G	NWNE	7	53N	75W	WYW143982
7	CEDAR DRAW UNIT 3	43-7G	NESE	7	53N	75W	WYW143982
8	CEDAR DRAW UNIT 3	14-8G	SWSW	8	53N	75W	WYW143982
9	CEDAR DRAW UNIT 3	13-9WG	NWSW	9	53N	75W	WYW0309256A
10	CEDAR DRAW UNIT 3	34-18WG	SWSE	18	53N	75W	WYW143983
11	CEDAR DRAW UNIT 3	12-18WG	SWNW	18	53N	75W	WYW143983
12	CEDAR DRAW UNIT 3	21-18WG	NENW	18	53N	75W	WYW143983
13	CEDAR DRAW UNIT 3	23-18WG	NESW	18	53N	75W	WYW143983
14	CEDAR DRAW UNIT 3	41-18WG	NENE	18	53N	75W	WYW143983
15	CEDAR DRAW UNIT 3	42-18WG	SENE	18	53N	75W	WYW143983
16	CEDAR DRAW UNIT 3	43-18WG	NESE	18	53N	75W	WYW143983
17	CEDAR DRAW UNIT 3	14-18WG	SWSW	18	53N	75W	WYW143983
18	CEDAR DRAW UNIT 3	21-19WG	NENW	19	53N	75W	WYW135223
19	CEDAR DRAW UNIT 3	23-19WG	NESW	19	53N	75W	WYW135223
20	CEDAR DRAW UNIT 3	44-19WG	SESE	19	53N	75W	WYW146814
21	CEDAR DRAW UNIT 3	11-29WG	NWNW	29	53N	75W	WYW143985
22	CEDAR DRAW UNIT 3	42-29G	SENE	29	53N	75W	WYW143985
23	CEDAR DRAW UNIT 3	14-28G	SWSW	28	53N	75W	WYW143985
24	CEDAR DRAW UNIT 3	21-32G	NENW	32	53N	75W	WYW143986
25	CEDAR DRAW UNIT 3	31-30WG	NWNE	30	53N	75W	WYW143985

	Well Name	Well #	QTR	Sec	TWP	RNG	Lease #
26	CEDAR DRAW UNIT 3	43-30WG	NESE	30	53N	75W	WYW143985
27	CEDAR DRAW UNIT 3	24-30WG	SESW	30	53N	75W	WYW143985
28	CEDAR DRAW UNIT 3	22-30G	SESW	30	53N	75W	WYW143985
29	CEDAR DRAW UNIT 3	13-31WG	NWSW	31	53N	75W	WYW143986
30	CEDAR DRAW UNIT 3	22-31WG	SESW	31	53N	75W	WYW143986
31	CEDAR DRAW UNIT 3	31-31WG	NWNE	31	53N	75W	WYW143986
32	CEDAR DRAW UNIT 3	11-31WG	NWNW	31	53N	75W	WYW143986
33	CEDAR DRAW UNIT 3	31-32WG	NWNE	32	53N	75W	WYW143986
34	CEDAR DRAW UNIT 3	42-32WG	SENE	32	53N	75W	WYW143986
35	CEDAR DRAW UNIT 3	44-32G	SESE	32	53N	75W	WYW143986
36	CEDAR DRAW UNIT 3	11-33G	NWNW	33	53N	75W	WYW143986
37	CEDAR DRAW UNIT 3	13-33G	NWSW	33	53N	75W	WYW143986
38	CEDAR DRAW UNIT 3	22-33G	SESW	33	53N	75W	WYW143986
39	CEDAR DRAW UNIT 3	24-33G	SESW	33	53N	75W	WYW143986
40	CEDAR DRAW UNIT 3	33-33G	NWSE	33	53N	75W	WYW143986
41	CEDAR DRAW UNIT 3	44-33G	SESE	33	53N	75W	WYW143986

Water Management:

Facility Name	Qtr/Qtr	Sec	TWP	RNG	Capacity (acre feet)	Surface Disturbance (acres)	Lease #
Res 32-6	SWNE	6	53N	75W	161	0*	WYW143982
Echeta Road (Existing)	NWNW	26	53N	76W	NA	0	None
Cedar Draw (Proposed)	NWNE	6	53N	75W	NA	2	WYW143982

* Approved under Cedar Draw Unit 1 POD

List of approved right-of ways:

Right-of-Way:

BLM approves the following road right-of-way, WYW-169609 under the Federal Land Policy and Management Act of 1976. Construction of the following location is prohibited until authorized rights-of-ways are issued. These rights-of-ways will fall within the constraints of the appropriate stipulations and conditions of approval of the POD.

Serial Number	Description	Length	Width	Sec	TWP	RNG
1	WYW-169609 Proposed template road	Apprx. 1,000'	NTE 45'	3	52N	75W

SITE SPECIFIC

Surface Use

1. Stabilization of steep slopes greater than 4H:1V will include but is not limited to the following components to minimize soil erosion and loss of seed:
 - a. Surface roughening/pocking or scarification perpendicular to the slope;

- i. Install slope breakers such as waddles and water bars at the appropriate spacing.
 - b. Seed with appropriate seed mix.
 - c. Apply straw mulch or bio/photodegradable erosion control fabric on highly erodible soils.
2. Waddling is most effective as erosion control if applied on slopes less than 3H:1V. In the absence of manufacture's specifications included in the operator's Master Surface Use Plan, construct per DEQ requirements.
3. All pit spoil must be placed back in the pit once the pit is dry or fluids are removed. Subsoil must then be replaced in the reserve pit before topsoiling. Under no circumstances would any by-products from drilling or subsoil to be spread on top of topsoil. The pit area should usually be mounded slightly or restored to the original contour to allow for settling and positive surface drainage.
4. The reserve pit will be lined with an impermeable liner for the following wells because sandy soils were identified during onsite visits:
 - 22-7, 23-7, 31-7, 44-32, 21-19, 23-19, 11-29, and 31-32.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.
5. The Cedar Draw Unit 3 Project area is dominated by soils that have been identified to have limited reclamation potential and/or soils susceptible to erosion that will require disturbed areas to be stabilized (stabilization efforts may include mulching, matting, soil amendments, etc.) in a manner which eliminates accelerated erosion until a self-perpetuating native plant community has stabilized the site in accordance with the Wyoming Reclamation Policy. Stabilization efforts shall be finished within 30 days of the initiation of construction activities. This applies to the following:
 - The Cedar Draw Unit 3 21-32, 43-7, and 22-31 wells;
 - The upgraded road section for the 22-30 well and 11-3 well access roads; and
 - cross country pipeline corridor running from the 22-31 well to the 43-30 well.
6. The operator is responsible for having the licensed professional engineer(s) certify that the actual construction of the road meets the design criteria and is constructed to Bureau standards.
7. All engineered road segments must be completed, including any culverts, low water crossings and required surfacing, before the drilling rig or other drilling equipment moves onto the pad.
8. The BLM requires the following roads on federal surface to be surfaced with an average of 4 inches of Gradation W gravel due to the higher anticipated ADT and steep slopes per the WY Supplement to the BLM Manual 9113: all roads with grades steeper than 8% grade or an anticipated ADT of 10 or greater.
9. By November 1 each year, the operator will submit the following information, attached to a Sundry Form 3160-5, where construction and development have taken place in the last year.
 - Georeferenced spatial data depicting as-built locations of all facilities, wells, roads, pipelines, power lines, reservoirs, discharge points, and other related facilities to the BLM for all PODs.
 - Two as-built copies of Map D.

Wildlife

Bald Eagles

The following conditions will alleviate impacts to bald eagles:

1. Surveys for active bald eagle nests and winter roost sites will be conducted within suitable habitat by a BLM approved wildlife biologist. Surface disturbing activities will not be permitted within one mile of suitable habitat prior to survey completion. Suitable habitat in the Cedar Draw Unit 3 POD is defined as portions of Wild Horse Creek and Middle Prong Wild Horse Creek (Attachment 1).
2. A minimum disturbance-free buffer zone of 0.5 mile (i.e., no surface occupancy) will be established year-round for all bald eagle nest sites. A seasonal minimum disturbance-free buffer zone of 1.0 mile will be established for all bald eagle nest sites (February 15 – August 15).
3. A seasonal minimum disturbance-free buffer zone of 1.0 mile will be established for all bald eagle winter roost sites (November 1 – April 1). These buffer zones and timing may be adjusted based on site-specific information through coordination with, and written approval from, the USFWS.

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 March 15 through July 31, prior to a nesting survey. This timing limitation will be in effect unless surveys determine the habitat to be unoccupied. Refer to the attached map (Attachment 2) for affected wells and infrastructure for the 2011 year.
 - 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 March 15 through July 31.

Raptors

The following conditions will alleviate impacts to raptors:

1. The operator shall not conduct workover operations associated with the 33-33-5375G well during the raptor timing period, prior to an occupancy survey of nest #3795 (operator committed measure). Surveys shall be conducted by a biologist following BLM protocol and results shall be submitted in writing to a Buffalo BLM biologist and approved prior to commencement of operations.
2. No surface-disturbing activities shall occur within 0.5 mile of all identified raptor nests, from February 1 through July 31, annually, prior to a nesting survey. This timing limitation will be in effect unless surveys determine the nest to be inactive. Refer to the attached map (Attachment 3) for affected wells and infrastructure for the 2011 year.
 - a. Surveys shall be conducted by a biologist following BLM protocol. All survey results shall be submitted in writing to a Buffalo BLM biologist and approved prior to surface disturbing activities.
 - b. 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

The following conditions will alleviate impacts to sage-grouse:

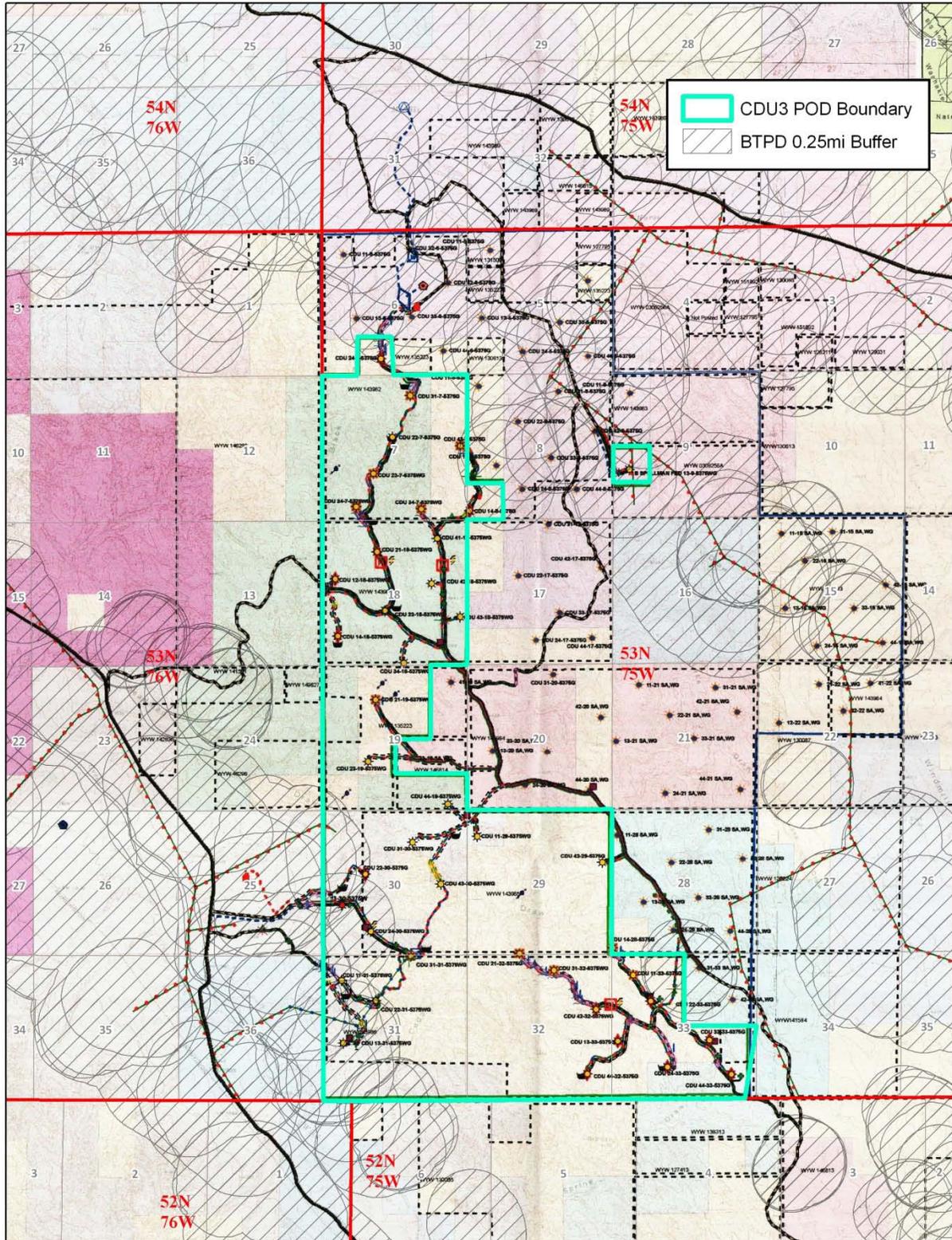
1. No surface-disturbing activities shall occur within 2.0 miles of the Laramore lek (Section 26, T53N R75W), from March 15 through June 30 (Buffalo RMP Maintenance Action September 17, 2010), annually. Refer to the attached map (Attachment 4) for affected wells and associated infrastructure.

Western Burrowing Owls

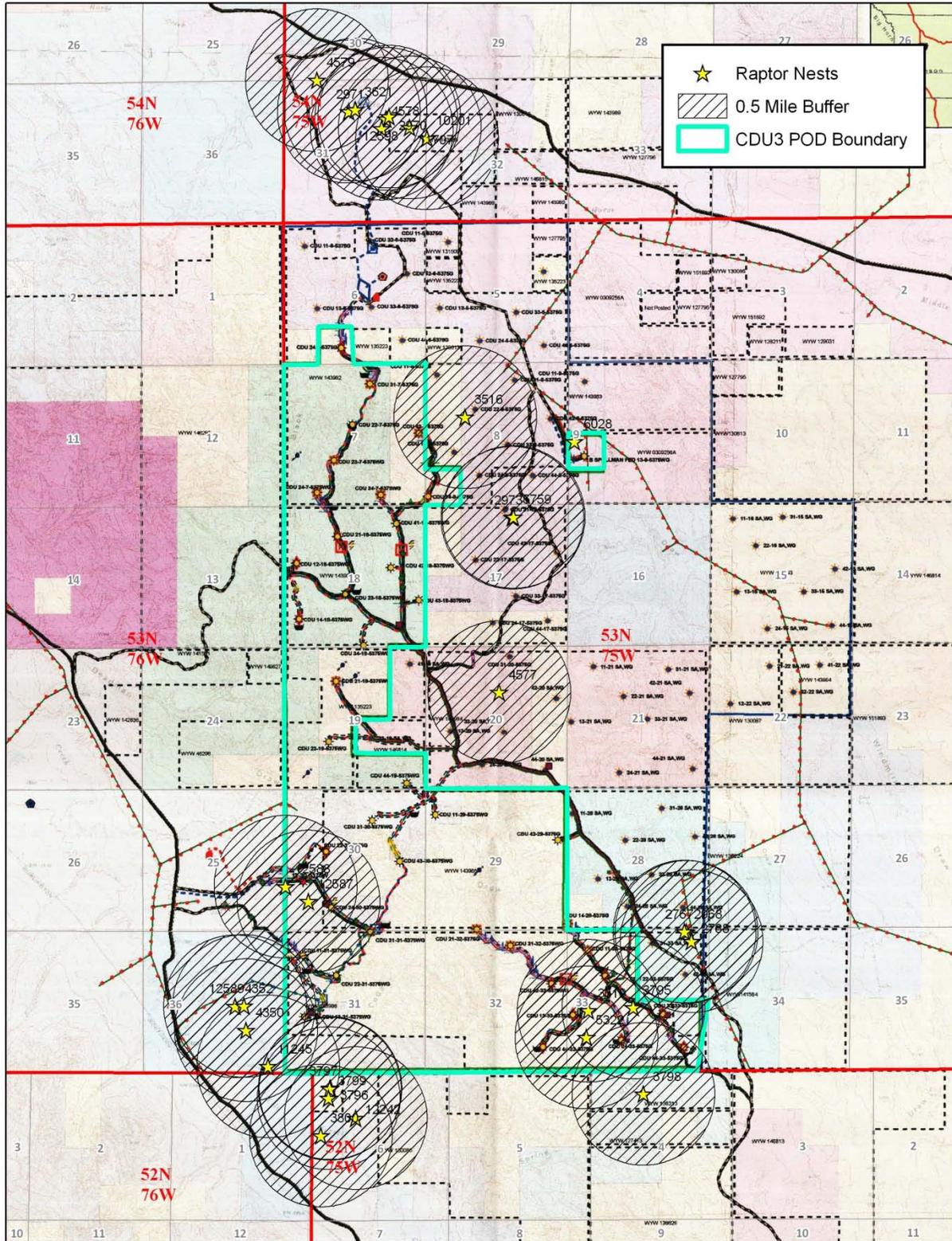
The following conditions will alleviate impacts to burrowing owls:

1. No surface-disturbing activities shall occur within 0.25 mile of all identified prairie dog colonies, from April 15 through August 31, annually, prior to a burrowing owl survey. This timing limitation will be in effect unless surveys determine that no burrowing owls are present. A 0.25 mile buffer will be applied if a burrowing owl nest is identified. Refer to the attached map (Attachment 2) for affected wells and infrastructure.
 - a. Surveys shall be conducted by a biologist following BLM protocol. All survey results shall be submitted in writing to a Buffalo BLM biologist and approved prior to surface disturbing activities.
 - b. If a burrowing owl nest is located during project construction or operation, the Buffalo Field Office (307-684-1100) shall be notified within 24 hours.

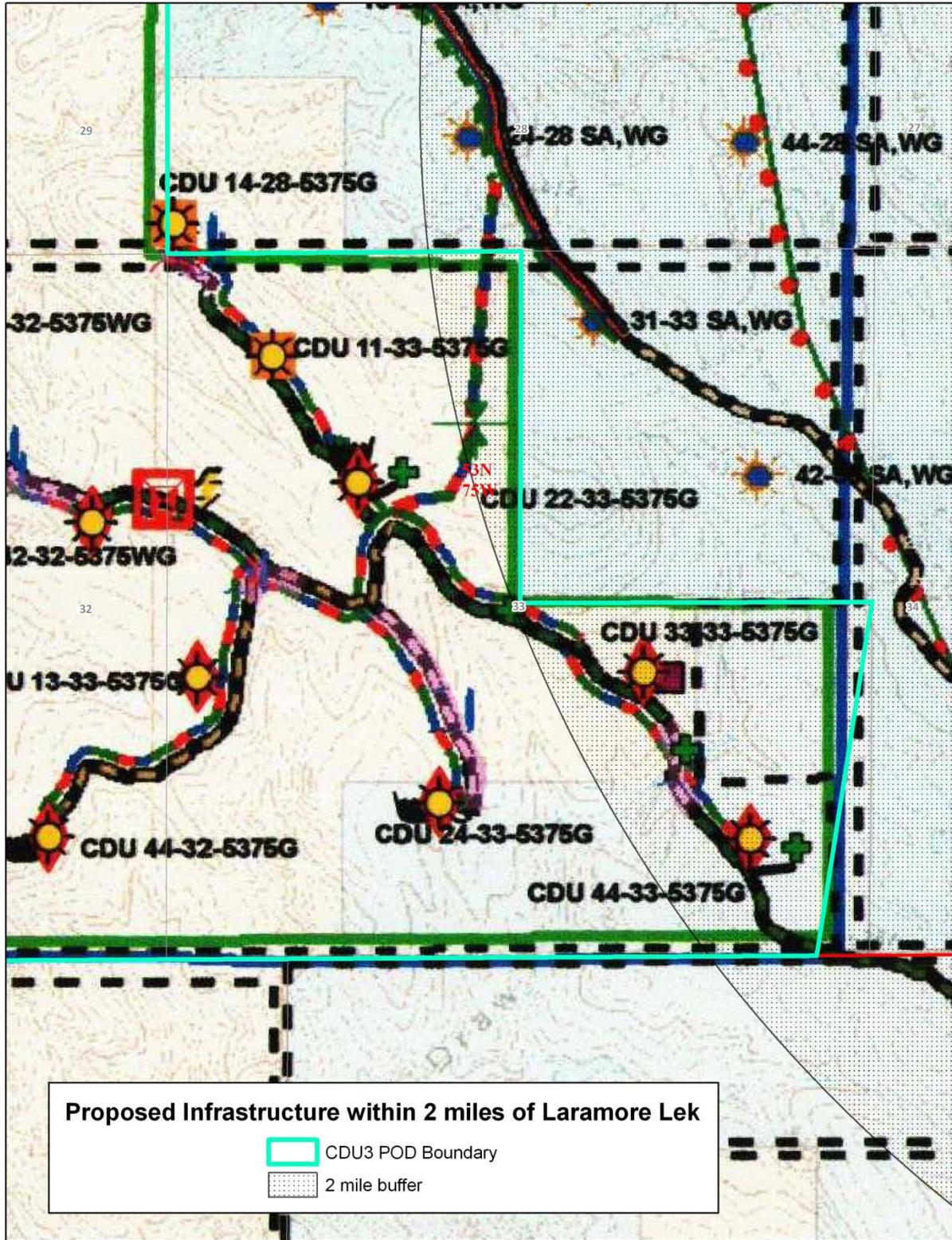
Attachment 2. Mountain Plover and Burrowing Owl Site Specific Condition of Approval Map



Attachment 3. Raptor Site Specific Condition of Approval Map



Attachment 4. Sage-grouse Site Specific Condition of Approval Map



Water

1. The operator will sample the springs as listed below twice each year (spring and fall) for the duration of production to determine any changes in water quality or quantity. Analysis will follow the WYPDES Permit initial quality criteria suite. Flow rate will also be determined. Copies of water quality and quantity data will be reported to the BLM BFO.

Spring Name	Qtr	Section	TwN	Rng
Spring 7-1	NW $\frac{1}{4}$ SW $\frac{1}{4}$	7	53N	75W
Spring 19-1	NW $\frac{1}{4}$ NE $\frac{1}{4}$	19	53N	75W
Spring 19-2	NE $\frac{1}{4}$ NW $\frac{1}{4}$	19	53N	75W
Spring 19-3	SW $\frac{1}{4}$ SW $\frac{1}{4}$	19	53N	75W
Spring 29-1	NE $\frac{1}{4}$ SW $\frac{1}{4}$	29	53N	75W

Cultural

All surface disturbing activity in the following areas will be monitored by a BLM cultural resource use permit (CRUP) holder or permitted crew chief. The Bureau has identified these areas as having a high potential for buried cultural deposits (areas containing alluvial deposits along Middle Prong Wild Horse Creek). Some portions of the monitoring areas as described may lie outside alluvial deposits and exact monitoring areas are left to the discretion of the archeological monitor. All monitored areas must be plotted on the map provided with the monitoring report. The submission of two copies of a monitoring report to BFO is required within 30 days of the completion of all monitoring work.

1. All surface disturbing activity associated with the construction of the waterline and outfall in T54N R75W Section 31, as delineated on the cultural resource inventory map.

PROGRAMMATIC

Programmatic mitigation measures identified in the PRB FEIS ROD

Programmatic mitigation measures are those, determined through analysis, which may be appropriate to apply at the time of APD approval if site specific conditions warrant. These mitigation measures can be applied by BLM, as determined necessary at the site-specific NEPA APD stage, as COAs and will be in addition to stipulations applied at the time of lease issuance and any standard COA.

Surface Water

2. Channel Crossings:
 - a) Channel crossings by road and pipelines will be constructed perpendicular to flow. Culverts will be installed at appropriate locations for streams and channels crossed by roads as specified in the BLM Manual 9112-Bridges and Major Culverts and Manual 9113-Roads. Streams will be crossed perpendicular to flow, where possible, and all stream crossing structures will be designed to carry the 25-year discharge event or other capacities as directed by the BLM.
 - b) Channel crossings by pipelines will be constructed so that the pipe is buried at least four feet below the channel bottom.
3. Low water crossings will be constructed at original streambed elevation in a manner that will prevent any blockage or restriction of the existing channel. Material removed will be stockpiled for use in reclamation of the crossings.
4. The operator will supply a copy of the complete approved Chapter 3 permit to construct associated with treatment facilities to BLM as they are issued by WDEQ.

Wildlife

1. For any surface-disturbing activities proposed in sagebrush shrublands, the Companies will conduct clearance surveys for sage grouse breeding activity during the sage grouse's breeding season before initiating the activities. The surveys must encompass all sagebrush shrublands within 0.5 mile of the proposed activities.

Threatened, Endangered, or Sensitive Species

Bald Eagle

1. In the event that a bald eagle (dead or injured) is located during construction or operation, the USFWS' Wyoming Field Office (307-772-2374) and the USFWS' Law Enforcement Office (307-261-6365) will be notified within 24 hours.
2. Special habitats for raptors, including wintering bald eagles, will be identified and considered during the review of Sundry Notices

Mountain Plover

1. A disturbance-free buffer zone of 0.25 mile will be established around all occupied mountain plover nesting habitat between March 15 and July 31.
2. Work schedules and shift changes will be set to avoid the periods from 30 minutes before to 30 minutes after sunrise and sunset during June and July, when mountain plovers and other wildlife are most active.

Noise

1. Noise mufflers will be installed on the exhaust of compressor engines to reduce the exhaust noise. Where noise impacts to existing sensitive receptors are an issue, noise levels will be required to be no greater than 55 decibels measured at a distance of 0.25 mile from the appropriate booster (field) compressor. When background noise exceeds 55dBA, noise levels will be no greater than 5dBA above background. This may require the installation of electrical compressor motors at these locations.
2. Two measurements commonly used to relate the time-varying quality of environmental noise to its known effects on people are the equivalent sound level (Leq) and the average day/night noise level (Ldn). The Leq is an A-weighted sound level containing the same sound energy as the instantaneous sound levels measured over a specific time period. Noise levels are perceived differently, depending on the length of exposure and the time of day. The Ldn takes into account the duration and time the noise is encountered. An additional 10 decibels on the A-weighted scale (dBA) are added to late night and early morning (10:00 p.m. to 7:00 a.m.) noise exposure levels to account for people's greater sensitivity to sound during the nighttime hours. After adjustment, the 24 hourly values are averaged to determine the ldn.
3. Existing literature concludes an ldn of 55 dBA is equivalent to a continuous noise level of 48.6 dBA for facilities that operate at a constant level of noise (FERC 2003).
4. Noise can be reduced by construction of obstacles in the direct path from the noise source to a receiver or by increasing the distance between a CBM facility and an existing noise-sensitive receptor.

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 M. Corey at 307.684.1070 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 5 working days the AO will inform the operator as to:
 - a. whether the materials appear eligible for the National Register of Historic Places;
 - b. the mitigation measures the operator will likely have to undertake before the site can be used (assuming in situ preservation is not necessary); and,
 - c. 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 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 M. Corey, Natural Resource Specialist, at (307) 684-1100, 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. The authorized officer may modify these requirements at any time if it is determined that increased pressure control is deemed necessary.
8. 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-Buffero 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-Buffero Field Office Petroleum Engineer.

SURFACE USE STANDARD

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 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.
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).
 - 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.
 - 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.
10. 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.
11. The minimum diameter for culverts will be 18 inches. However, all culverts will be appropriately sized in accordance with standards in BLM Manual 9113.

12. Construction and other project-related traffic will be restricted to approved routes. Cross-country vehicle travel will not be allowed.
13. Maximum design speed on all operator constructed and maintained roads will not exceed 25 miles per hour.
14. 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.
15. Pipeline trenches shall be compacted during backfilling. Pipeline trenches shall be routinely inspected and maintained to ensure proper settling, stabilization and reclamation.
16. 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.
17. 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.
18. 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.

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 will be complied with.
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 this (site, project), is (name and Munsell Soil Color Number).

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

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.

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:

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

7. The operator will drill seed on the contour no greater than 0.5 inch followed by cultipaction to compact the seedbed, preventing soil and seed losses. To maintain quality and purity, the current years tested, certified seed with a minimum germination rate of 80% and a minimum purity of 90% will be used. On BLM surface or in lieu of a different specific mix desired by the surface owner, use the following:

Site-specific Seed Mixes by Ecological Site

Sandy Ecological Site Seed Mix	
Species	Lbs PLS*
<i>Thickspike Wheatgrass (Elymus lanceolatus ssp. lanceolatus)</i>	3.5
<i>Prairie sandreed (Calamovilfa longifolia)</i>	4.6
<i>Indian ricegrass (Achnatherum hymenoides)</i>	3.5
<i>Blue grama (Bouteloua gracilis)</i> Or <i>Needleandthread (Hesperostipa comate)</i>	1.0
<i>Prairie coneflower (Ratibida columnifera)</i>	0.8
<i>White or purple prairie clover (Dalea candidum, purpureum)</i>	0.8
<i>Blue flax (Linum lewisii)</i>	0.8
<i>Fourwing saltbush (Atriplex canescens)</i> Or <i>Wyoming big sagebrush (Artemisia tridentate)</i> Or <i>Winterfat (Krascheninnikovia lanata)</i>	0.5
<i>Rubber rabbitbrush (Ericameria nauseosus)</i> Or <i>Green rabbitbrush (Chrysothamnus viscidiflorous)</i>	0.5
Totals	16 lbs/acre

Loamy Ecological Site Seed Mix	
Species	Lbs PLS*
<i>Western Wheatgrass (Pascopyrum smithii)</i> Or <i>Thickspike Wheatgrass (Elymus lanceolatus ssp. lanceolatus)</i>	3.9
<i>Bluebunch Wheatgrass (Pseudoroegneria spicata ssp. Spicata)</i>	1.5
<i>Green needlegrass (Nassella viridula)</i>	3.4
<i>Slender Wheatgrass (Elymus trachycaulus ssp. trachycaulus)</i>	2.8
<i>Blue grama (Bouteloua gracilis)</i> Or <i>Needleandthread (Hesperostipa comate)</i>	1.0
<i>Prairie coneflower (Ratibida columnifera)</i>	0.8
<i>White or purple prairie clover (Dalea candidum, purpureum)</i>	0.8

Loamy Ecological Site Seed Mix	
Species	Lbs PLS*
<i>Rocky Mountain beeplant (Cleome serrulata)</i>	0.8
<i>Fourwing saltbush (Atriplex canescens)</i> Or <i>Wyoming big sagebrush (Artemisia tridentate)</i> Or <i>Winterfat (Krascheninnikovia lanata)</i>	0.5
<i>Rubber rabbitbrush (Ericameria nauseosus)</i> Or <i>Green rabbitbrush (Chrysothamnus viscidiflorous)</i>	0.5
Totals	16 lbs/acre

Clayey Ecological Site Seed Mix	
Species	Lbs PLS*
<i>Western Wheatgrass (Pascopyrum smithii)</i>	4.6
<i>Green needlegrass (Nassella viridula)</i>	5.2
<i>Slender Wheatgrass (Elymus trachycaulus ssp. trachycaulus)</i>	1.8
<i>Blue grama (Bouteloua gracilis)</i> Or <i>Needleandthread (Hesperostipa comate)</i>	1.0
<i>Prairie coneflower (Ratibida columnifera)</i>	0.8
<i>White or purple prairie clover (Dalea candidum, purpureum)</i>	0.8
<i>Rocky Mountain beeplant (Cleome serrulata)</i>	0.8
<i>Fourwing saltbush (Atriplex canescens)</i> Or <i>Wyoming big sagebrush (Artemisia tridentate)</i> Or <i>Winterfat (Krascheninnikovia lanata)</i>	0.5
<i>Rubber rabbitbrush (Ericameria nauseosus)</i> Or <i>Green rabbitbrush (Chrysothamnus viscidiflorous)</i>	0.5
Totals	16 lbs/acre

Shallow Clayey Ecological Site Seed Mix	
Species	Lbs PLS*
<i>Western Wheatgrass (Pascopyrum smithii)</i>	2.4
<i>Green needlegrass (Nassella viridula)</i>	2.4
<i>Blue grama (Bouteloua gracilis)</i> Or <i>Needleandthread (Hesperostipa comate)</i>	1.0
<i>American vetchz (Vicia Americana)</i>	1.0
<i>Blue flax (Linum lewisii)</i>	0.2
<i>Fourwing saltbush (Atriplex canescens)</i> Or <i>Wyoming big sagebrush (Artemisia tridentate)</i> Or <i>Winterfat (Krascheninnikovia lanata)</i>	0.5
<i>Rubber rabbitbrush (Ericameria nauseosus)</i> Or <i>Green rabbitbrush (Chrysothamnus viscidiflorous)</i>	0.5
Totals	8.0 lbs/acre

Slopes too steep for machinery may be hand broadcast and raked with twice the specified amount of seed.

8. 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.
9. A Notice of Intent to Abandon and a Subsequent Report of Abandonment must be submitted for abandonment approval.
10. 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.
11. 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.

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

13. Any mulch utilized for reclamation needs to be certified weed free.