

CONDITIONS OF APPROVAL FOR THE APPLICATION
FOR PERMIT TO DRILL

POD Name: Highland Unit Delta POD

Operator Name: Lance Oil and Gas Inc.

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

Office Telephone Number: 307-684-1100

List of Wells:

	Well Name	Well #	Sec	TWN	RNG	Lease	QTR
1	Highland Delta Powder River Fed	12-5	5	51N	77W	WYW153356	SWNW
2	Highland Delta Powder River Fed	14-5	5	51N	77W	WYW153356	SWSW
3	Highland Delta HU Fed	21-2	2	51N	78W	WYW146342	NENW
4	Highland Delta HU Fed	24-2	2	51N	78W	WYW146342	SESW
5	Highland Delta HU Fed	31-2	2	51N	78W	WYW146342	NWNE
6	Highland Delta HU Fed	33-2	2	51N	78W	WYW146342	NWSE
7	Highland Delta HU Fed	34-2	2	51N	78W	WYW146342	SWSE
8	Highland Delta HU Fed	23-3	3	51N	78W	WYW146343	NESW
9	Highland Delta HU Fed	32-3	3	51N	78W	WYW146343	SWNE
10	Highland Delta HU Fed	34-3	3	51N	78W	WYW146343	SWSE
11	Highland Delta HU Fed	41-3	3	51N	78W	WYW146343	NENE
12	Highland Delta HU Fed	44-3	3	51N	78W	WYW146343	SESE
13	Highland Delta HU Fed	13-4	4	51N	78W	WYW146343	NWSW
14	Highland Delta HU Fed	14-4	4	51N	78W	WYW146343	SWSW
15	Highland Delta HU Fed	21-4	4	51N	78W	WYW146343	NENW
16	Highland Delta HU Fed	23-4	4	51N	78W	WYW146343	NESW
17	Highland Delta HU Fed	24-4	4	51N	78W	WYW146343	SESW
18	Highland Delta HU Fed	32-4	4	51N	78W	WYW146343	SWNE
19	Highland Delta HU Fed	41-4	4	51N	78W	WYW146343	NENE
20	Highland Delta HU Fed	12-9	9	51N	78W	WYW146343	SWNW
21	Highland Delta HU Fed	14-9	9	51N	78W	WYW146343	SWSW
22	Highland Delta HU Fed	24-9	9	51N	78W	WYW146343	SESW
23	Highland Delta HU Fed	41-9	9	51N	78W	WYW146343	NENE
24	Highland Delta HU Fed	13-10	10	51N	78W	WYW146343	NWSW
25	Highland Delta HU Fed	14-10	10	51N	78W	WYW146343	SWSW
26	Highland Delta HU Fed	21-10	10	51N	78W	WYW146343	NENW
27	Highland Delta HU Fed	23-10	10	51N	78W	WYW146343	NESW
28	Highland Delta HU Fed	34-10	10	51N	78W	WYW126721	SWSE
29	Highland Delta HU Fed	41-10	10	51N	78W	WYW146343	NENE
30	Highland Delta HU Fed	43-10	10	51N	78W	WYW126721	NESE

	Well Name	Well #	Sec	TWN	RNG	Lease	QTR
31	Highland Delta HU Fed	44-10	10	51N	78W	WYW126721	SESE
32	Highland Delta HU Fed	11-11	11	51N	78W	WYW146342	NWNW
33	Highland Delta HU Fed	21-11	11	51N	78W	WYW146342	NENW
34	Highland Delta HU Fed	23-11	11	51N	78W	WYW146342	NESW
35	Highland Delta HU Fed	31-11	11	51N	78W	WYW146342	NWNE
36	Highland Delta HU Fed	32-11	11	51N	78W	WYW146342	SWNE
37	Highland Delta HU Fed	41-11	11	51N	78W	WYW146342	NENE
38	Highland Delta HU Fed	42-11	11	51N	78W	WYW146342	SENE

List of Discharge Points:

	Discharge Site	Qtr/Qtr	Sec	TWP	RNG	Latitude	Longitude	Maximum Est. Flow (GPM)
1	WY0056081-016	NESW	32	51	77	44.34899	-106.15241	780
2	WY0056081-018	NWSE	20	51	77	44.37728	-106.14821	780

SITE SPECIFIC

Site-Specific Conditions of Approval

In addition to the operator committed measures, and those incorporated from the PRB FEIS, the BLM is including the following site-specific COAs to alleviate environmental impacts:

Surface Use

1. Prior to construction, the operator will remove all staking for those areas which were not approved with the POD/APD. Note well 13-11 was removed from the project by the operator.
2. Submit new POD maps with only approved wells and infrastructure, prior to the pre-construct.
3. In order to reduce disturbance in the sage grouse lek in section 11 submit a sundry to remove the impoundment from the Highland Unit Gamma POD.
4. To limit travel through leks, place five “No Oil and Gas Traffic” signs; one at each entrance/exit through leks. There will be three signs placed in section 3, one sign placed in section 9 and one sign in section 10.

Township/Range	Section	QTR	Location
T51N, R78W	3	NWSW	Place sign at road south of the ranch operations
T51N, R78W	3	SESW	Place sign at road, west of well 23-3, which heads north through lek toward ranch operations
T51N, R78W	3	SESW	Place sign at road that veers southwest through lek toward the 13-10 well
T51N, R78W	9	NESE	Place sign east of the 43-9 well on road south of the lek
T51N, R78W	10	NWSW	Place sign north side of 13-10 well location, on the road that heads north toward the lek

5. For all wells spudded after November 1, the reserve pit fluids must be removed immediately following completion activities to avoid potential conflicts with raptor timing limitations and the

standard COA that reserve pits be closed within 90 days, unless an exception is granted by the BLM Authorized Officer.

6. Improved roads with utility corridor working width will not exceed 50 feet with a clearing and blading not to exceed 40 feet in width unless a specific design is included in the plan and profile section of the master surface use plan.
7. Primitive roads with utility corridor working width will not exceed 40 feet with a clearing and blading not to exceed 30 feet in width.
8. Pipeline installation and/or corridors without road access working width will not exceed 35 feet with clearing and blading not to exceed 20 feet.
9. All pit spoil must be placed back in the pit once dry. The pit area should usually be mounded slightly to allow for settling and positive surface drainage.
10. All permanent above-ground structures, including well houses, compressor stations, and transformer boxes, 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 Highland Unit Delta POD is Covert Green.
11. In areas where there are steep slopes and/or fragile soils, improved roads used in conjunction with accessing federal wells must be fully built (including all water control structures such as wing ditches, culverts, relief ditches, low water crossings, surfacing, etc.) and functional to BLM standards as outlined in the BLM Manual 9113 prior to drilling of the well. Specifically for this POD approved engineered roads must be fully built prior to accessing the well for drilling. The remaining roads in this POD, not constructed prior to drilling, will be fully built within 30 days of completion of the well they are used to access.
12. In areas where there are poor soils, low reclamation potential or a high potential for wind or water erosion, the operator must stabilize topsoil within 30-days of construction; specifically the access road to the 32-4 and the 21-4 well location.
13. The operator will seed on the contour to a depth of no more than 0.5 inch. To maintain quality and purity, 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 seed mix in the Highland Unit Delta MSUP pages 24 and 25.

Seed Mixes	Well Number
Loamy	12-5, 14-5, 23-3, 32-3, 34-3, 13-4, 14-4, 23-4, 24-4, 32-4, 41-4, 12-9, 14-9, 41-9, 13-10, 14-10, 23-10, 32-10, 34-10, 41-10, 44-10, 31-11,
Shallow	24-2, 31-2, 41-3, 44-3, 21-4, 24-9, 21-10, 11-11, 21-11, 23-11, 32-11, 41-11, 42-11
Sandy	21-2, 33-2, 34-2

Road Construction

1. 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.
2. All engineered road segments must be complete including culverts and low water crossings before the drilling rig or other drilling equipment moves onto the pad.

3. The main existing access road through sections 15, 10, 3, 4, 9, & 16 will require maintenance to level ruts and reestablish crown. Surfacing material on this portion of road will meet the grading requirements for “Grading W” as outlined in the Wyoming Highway Department’s Standard Specification for Road and Bridge Construction due to the high anticipated levels of Average Daily Traffic (ADT).
4. Turnouts will be provided on engineered and template resource roads as outlined in the BLM Manual 9113 .45E(7), which is every 1000’ or interspersible for single lane roads.
5. Replace the 15 mph speed limit sign with a 10 mile per hour speed limit signs at STA: 10+00 on Engineered road 44-3-5178 due to the limited meeting sight distance.

Wildlife

Raptors:

The following conditions will alleviate impacts to raptors:

1. No surface disturbing activity shall occur within 0.5 mile of all identified raptor nests from February 1 through July 31, annually, prior to a raptor nest occupancy survey for the current breeding season. This timing limitation will affect the following:

Township/Range	Section	Wells and Infrastructure
T51N, R78W	2	• Wells 21-2, 31-2, 33-2.
	3	• Wells 23-3, 32-3, 34-3, 44-3 and access corridor.
	4	• Wells 13-4, 23-4, and access corridors.
	11	• Wells 23-11, 32-11, 42-11 and access corridors.
	15	• Access corridors in the SENE Section 15 T51N, R78W
T52N, R78W	35	• The access corridor in the SW ¼ of Section 35.

2. Surveys for new raptor nests shall be conducted, annually, within 0.5 miles of the POD boundary on or after 15 April, and prior to or during the first nest occupancy check.
3. Nest occupancy checks shall be completed for all raptor nests identified within a 0.5 mile of any infrastructure associated with the POD for as long as the POD is under construction. Once construction of the POD has ceased, nest occupancy checks shall continue for the first five years on all identified nests within a 0.5 mile of the POD boundary. Survey results will be submitted to a Buffalo BLM biologist in writing no later than 31 July of each survey year and will include a map showing updated COA 0.5 mile raptor buffers.
4. Well metering, maintenance and other site visits within 0.5 miles of raptor nests should be minimized during the breeding season (February 1 – July 31).

Western Burrowing Owl:

The following conditions will alleviate impacts to burrowing owls:

1. No surface disturbing activity shall occur within 0.25 miles of all identified prairie dog colonies from April 15 to August 31, annually, prior to a burrowing owl nest occupancy survey for the current breeding season. A 0.25 mile buffer will be applied if a burrowing owl nest is identified. This condition will be implemented on an annual basis for the duration of surface disturbing activities within the prairie dog town(s). This timing limitation will be in effect unless surveys determine the nest(s) to be inactive. This timing limitation will affect the road and utility corridor in T51N, R76W section 15.

Sage-Grouse:

The following conditions will reduce impacts to sage-grouse:

No surface disturbing activities are permitted from March 15 to June 30. This condition will be implemented on an annual basis for the life of the project. This condition applies to all POD surface disturbing activities in Township 51 North, Range 78 West and Township 52 North, Range 78 West.

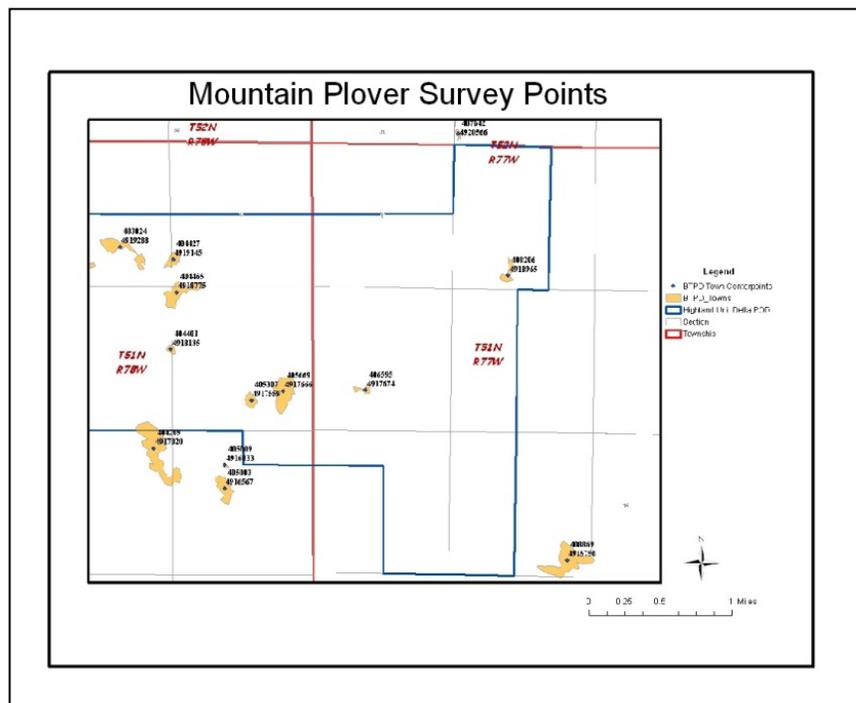
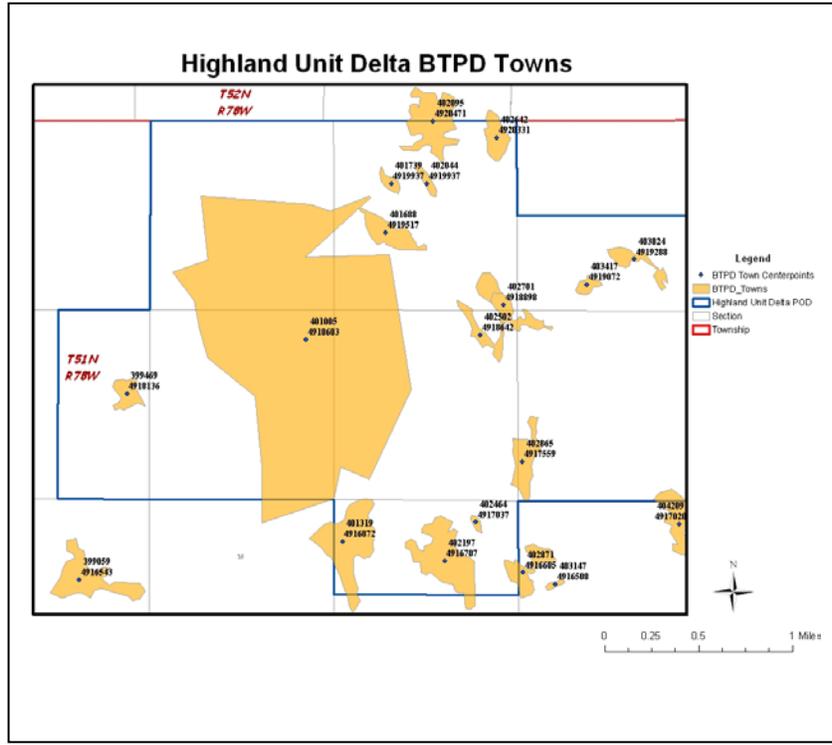
- a. A sage-grouse survey will be conducted by a biologist following the most current WGFD protocol. All survey results shall be submitted in writing to a Buffalo BLM biologist and approved prior to surface disturbing activities.
- b. Maximum design speed on all operator-constructed and maintained roads (except county roads) will not exceed 25 miles per hour except travel along roads within 1/2 mile of the Kinney Draw I, II, III sage-grouse leks and the Nurse Draw lek. These roads will be posted at 10 mph.
- c. Disruptive activity is restricted on or within a 0.25 mile radius of the perimeter of occupied or undetermined sage-grouse leks from 6:00 pm to 8:00 am from March 15-May 15. "Disruptive activities are those that "...require people and/or activity to be in nesting habitats for a duration of 1 hour or more during a 24 hour period..." (BLM 2009). This condition applies to the Kinney Draw I, II, and III leks and the Nurse Draw lek.

Mountain Plover

The following conditions will alleviate impacts to mountain plovers:

1. A mountain plover nesting survey is desired in suitable habitat prior to commencement of surface disturbing activities in the prairie dog towns located on the attached mountain plover survey maps, below. If the survey is not conducted prior to commencement of surface disturbing activities, it shall be conducted during the first breeding season following POD approval. No surface disturbing activities are permitted in suitable habitat areas on the attached maps, from March 15-July 31, until a mountain plover nesting survey has been conducted for the current breeding season.
2. If a mountain plover is identified, then a seasonal disturbance-free buffer of 1/4 mile shall be maintained between March 15 and July 31. If no mountain plovers are identified, then surface disturbing activities may be permitted within suitable habitat until the following breeding season (March 15).
 - a. 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.
 - b. No dogs will be permitted at work sites to reduce the potential for harassment of mountain plovers.

Map 1 Mountain Plover Survey Maps



PROGRAMMATIC

1. During construction, emissions of particulate matter from well pad and resource road construction will be minimized by application of water, or other dust suppressants, with at least 50 percent control efficiency. Roads and well locations constructed on soils susceptible to wind erosion could be appropriately surfaced or otherwise stabilized to reduce the amount of fugitive dust generated by traffic or other activities, and dust inhibitors (surfacing materials, non-saline dust suppressants, and water) could be used as necessary on unpaved collector, local and resource roads that present a fugitive dust problem. The use of chemical dust suppressants on BLM surface will require prior approval from the BLM authorized officer.

STANDARD

General

1. All contractors/operators will have a complete copy of the approved APD/POD, including COAs, at the drill site, during the construction of the roads and drill pad, the drilling of the well, completion of the well, and all other related construction activities.
2. 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 NRS Jennifer Spegon at 307-684-1059 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.
3. Approval of this APD does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease that would entitle the applicant to conduct operations thereon. In addition, approval of this APD does not imply that the operator has legal access to the drilling location. When crossing private surface 43 CFR 3814 regulations must be complied with and when crossing public surface off-lease the operator must have an approved right-of-way.
4. Confine all equipment and vehicles to the access road(s), pad(s), and area(s) specified in the approved APD or POD.
5. The approval of this project does not grant authority to use off lease Federal lands. No surface disturbing activity, or use of off-lease federal lands, is allowed on affected leases until right-of-way grants become effective which is the date signed by the authorized officer.
6. This POD is valid for two years from the date of approval or until the oil and gas lease expires/terminates, whichever occurs first. If this well intends to earn a lease extension, diligent operations (actual drilling) must be in progress over the lease expiration date, advance lease rentals must have been paid, and a letter stating drilling operations were in progress must be submitted to this office no later than five days past the expiration date. If the APD terminates, any surface disturbance created under the application must be reclaimed according to an approved plan.
7. The operator will be in compliance with all applicable local, state and/or federal laws, regulations, and/or statutes.
8. A progress report must be filed a minimum of once a month starting with the month the well was spudded continuing until the well is completed. The report must be filed by the 25th of each month

on a Sundry Notice (Form 3160-5). The report will include the spud date, casing information such as size, grade, weight, hole size, and setting depth, amount and type of cement used, top of cement, depth of cementing tools, casing test method, intervals tested, perforated, acidized, fractured and results obtained and the dates all work done.

9. In the event abandonment of the hole is desired, an oral request may be granted by this office but must be timely followed within 5 days with a "Notice of Intention to Abandon" (Form 3160-5). The "Subsequent Report of Abandonment" (Form 3160-5) must be submitted within 30 days after the actual plugging of the well bore, reporting where the plugs were placed, and the current status of the surface restoration.
10. Whether the well is completed as a dry hole or as a producer, two copies of all logs run, core descriptions, core analysis, well-test data, geologic summaries, sample descriptions, and all other surveys or data obtained and compiled during the drilling, work over, and/or completion operations will be filed with Form 3160-4. A gamma ray log shall be run from T.D. to ground surface.
11. The operator is responsible for informing all persons associated with this project that they shall be subject to prosecution for damaging, altering, excavating or removing any archaeological, historical, or vertebrate fossil objects on site. If archaeological, historical, or vertebrate fossil materials are discovered, the operator is to suspend all operations that further disturb such materials and immediately contact the Authorized Officer. Operations are not to resume until written authorization to proceed is issued by the Authorized Officer.
12. Within five (5) working days, the Authorized Officer will evaluate the discovery and inform the operator of actions that will be necessary to prevent loss of significant cultural or scientific values.
13. The operator is responsible for the cost of any mitigation required by the Authorized Officer. The Authorized Officer will provide technical and procedural guidelines for the conduct of mitigation. Upon verification from the Authorized Officer that the required mitigation has been completed, the operator will be allowed to resume operations.
 - a. 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.
 - b. 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.

14. The operator shall be responsible for the prevention of fires on public lands caused by its employees, contractors or subcontractors. During conditions of extreme fire danger, surface use operations may be limited or suspended in specific areas.
15. All survey monuments found within the area of operations shall be protected. Survey monuments include, but are not limited to: General Land Office and Bureau of Land Management Cadastral Survey Corners, reference corners, witness points, U. S. Coast and Geodetic benchmarks and triangulation stations, military control monuments, and recognizable civil (both public and private) survey monuments. In the event of obliteration or disturbance of any survey monuments, the incident shall be reported in writing to the Authorized Officer.
16. If any time the facilities located on public lands authorized by the terms of the lease are no longer included in the lease (due to a contraction in the unit or other lease or unit boundary change) the BLM will process a change in authorization to the appropriate statute. The authorization will be subject to appropriate rental, or other financial obligation determined by the authorized officer.
17. Gas produced from this well may not be vented or flared beyond an initial authorized test period of 30 days or 50 MMCF following its completion, whichever first occurs, without the prior written approval of the authorized officer. If gas is vented or flared without approval beyond the test period authorized above, you may be directed to shut-in the well until the gas can be captured or approval to continue venting or flaring as uneconomic is granted. You shall be required to compensate the lessor for that portion of the gas vented or flared without approval which is determined to have been avoidably lost.
18. The first producing well drilled to each targeted coal zone will be designated as the POD "Reference Well". Reference wells will not be required for PODs within a 6 mile radius of the first reference well designated by the operator, nor for co-mingled coal zones. The designated reference well must be equipped to be sampled at the well head. A reference well sample will be collected from the wellhead and submitted for analysis; using the list of analytes identified in WDEQ WYPDES Application for Permit to Surface Discharge Produced Water from CBM New Discharges, Renewals, or Major Modifications, within 30 to 60 days of initial water production. Results of the analysis will be submitted to the BFO-BLM authorized Officer as they become available and will include the following information: Operator Name, POD Name, Well Name and location and Date Sampled.
19. By November 1 each year, companies 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.

20. If any dead or injured threatened, endangered, proposed, or candidate species is located during construction or operation, the U.S. Fish and Wildlife Service's Wyoming Field Office (307-772-2374), their law enforcement office (307-261-6365), and the BLM Buffalo Field Office (307-684-1100) shall be notified within 24 hours. If any dead or injured sensitive species is located during construction or operation, the BLM Buffalo Field Office (307-684-1100) shall be notified within 24 hours.
21. Operators shall comply with all other conservation measures and terms and conditions identified in the Powder River Basin Oil and Gas Project Biological Opinion (ES-6-WY-07-F012).
22. 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.

DRILLING AND PRODUCTION OPERATIONS

1. The spud date will be reported electronically, (see website location above) to the Authorized Officer 24 HOURS BEFORE SPUDDING, unless otherwise required in site specific conditions of approval.

Spud Notice Site:

http://www.wy.blm.gov/minerals/og/og_notices/spud_notice.php

2. The operator shall complete coal bed natural gas 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.

Well Control Equipment

1. The well control equipment approved in this project lists the minimum requirements.
2. 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.
3. The flow line shall be a straight run.
4. The flow line must be constructed from non-flammable material.
5. All cuttings and circulating medium shall be directed to and contained in a reserve pit.
6. The nearest edge of the pits shall be a minimum of 25' from the rig.
7. A minimum of 2' of freeboard shall be maintained in the pits at all times.
8. The authorized officer may modify these requirements at any time if it is determined that increased pressure control is deemed necessary.
9. 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.

Casing Program

1. The minimum requirement for casing centralizers is as follows: all casing strings will have centralizers on the bottom three joints (i.e. a minimum of one centralizer per joint starting with the shoe joint).
2. In addition, the production casing string shall be centralized with API approved centralizers using the following specifications:
 - 2.1. One centralizer per~120' (specifically every third or fourth joint depending on joint length).
 - 2.2. One centralizer 25' above surface casing shoe.
3. Surface casing length shall follow current requirements set forth by the WOGCC. Increased surface casing may be required so that the surface casing shoe may be set into a competent formation.

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. Remedial cementing will consist of, but may not be limited to:
 - 2.1. Perforating and squeezing cement to ground surface should the top of cement (TOC) be below the surface casing shoe. This shall be done within 36 hours of the completion of pumping the primary cement job.
 - 2.2. One-inching cement to ground surface should the top of cement (TOC) be above the surface casing shoe.
 - 2.3. Fallback that is found to be less than 30' from ground surface may be topped off with cement slurry.
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 the same water used to develop the cement program and be of adequate quality, so as not to degrade the setting properties. Waters containing high carbonates or bicarbonates (greater than 2,000 ppm) should be avoided.

Production Equipment

1. All gas measurement equipment that deviates from Onshore Order #5 (or WY NTL 2004-1 in the case of electronic flow computers) shall be approved via a Notice of Intent sundry (Form No. 3160-5) prior to installation and use. This includes any type of primary device other than a standard orifice plate meter. Requests for a variance from the minimum standards of Onshore Order #5 must list:

The specific type of equipment.

How this equipment will meet or exceed the requirements of Onshore Order #5.

The location, specific well and lease number where the equipment will be used.

2. An appropriate pressure gauge is required to be installed on each casing annulus to monitor this pressure.
3. 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. A map shall be attached to the sundry

that delineates where the individual wells will be measured for federal royalty. Unless this POD is committed to a Federal Oil & Gas Unit or Agreement, the production from all Federal wells shall be measured for Federal royalty prior to being combined with production from any other Federal, Indian, or non-Federal leases.

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

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:

Petroleum Engineer: Matthew Warren

Home Telephone: 307-620-0103

Petroleum Engineer: James Evans

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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. Prior to construction, the operator will remove all staking (engineered road, pads, well stakes, etc.) for those areas which were not approved with the POD/APD.
2. All roads, well pads, rig slots, culverts, spot upgrades and locations where engineered construction will occur will be completely slope staked for review prior to construction.
3. Topsoil will be segregated for all excavation including the entire disturbance area for constructed pads and excavated areas for rig leveling, reserve pits, constructed roads, spot upgrades, reservoir upgrades, outfalls and utility trenches and redistributed for interim reclamation activities. This requirement will not be applied for pipelines installed with wheel trenchers.
4. 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.
5. Maintain a minimum 20-foot undisturbed vegetative border between disturbance areas and the edge of adjacent drainages, unless otherwise directed by the BLM Authorized Officer.
6. 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.
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. The culvert locations will be staked prior to construction. The culvert invert grade and finished road

grade will be clearly indicated on the stakes. Culverts will be installed on natural ground, or on a designed flow line of a ditch. The minimum cover over culverts will be 12” or one-half the diameter whichever is greater. Drainage laterals in the form of culverts or waterbars shall be placed according to the following spacing:

Soil Type	Road Grade 2-4%	Road Grade 5-8%	Road Grade 9-12%	Road Grade 13-16%
Highly erosive Granitic or sandy	240	180	140	100
Intermediate Erosive clay or loam	310	260	200	150
Low erosive shale or gravel	400	325	250	175

11. Provide 4” of aggregate where grades exceed 8%. Surface material must meet requirements set forth in Wyoming Supplement to BLM Road Manual 9113.
12. The minimum diameter for culverts will be 18 inches. However, all culverts will be appropriately sized in accordance with standards in BLM Manual 9113 or at the discretion of the Authorized Officer.
13. Maximum 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. Suspended pipelines shall provide adequate clearance for maximum runoff.
15. 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.

B. Operations/Maintenance

1. 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.
2. Sewage shall be placed in a self-contained, chemically treated porta-potty on location.
3. 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.

4. 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.
5. 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.

6. 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. Pits must be dry of fluids or they must be removed via vac-truck or other environmentally acceptable method prior to backfilling, re-contouring and replacement of topsoil. Mud and cuttings left in pit must be buried at least 3-feet below re-contoured grade. The operator will be responsible for re-contouring any subsidence areas that develop.
7. 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.
8. 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.
9. Prior to the use of pesticides on public land, the holder shall obtain from the BLM authorized officer a pesticide use permit (PUP). The PUP must include a 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.

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.
2. 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.

3. 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.
4. 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.

D. Reclamation/Dry Hole

1. BLM will not release the performance bond until all disturbed areas associated with the APD/POD have 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.
2. A Notice of Intent to Abandon and a Subsequent Report of Abandonment must be submitted for abandonment approval.
3. 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.
4. 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:
 - 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 CBNG water, including discharge points, reservoirs, off-channel pits, land application areas, livestock/wildlife watering facilities, surface discharge stream channels, etc.
 - Refer to *BLM Impoundment Reclamation Guidance* for further information on reclaiming impoundments.
 - Refer to the *Wyoming Reclamation Policy* for further guidance on reclamation.
5. All disturbed lands associated with this project, including the pipelines, access roads, water management facilities, etc will be reclaimed and reseeded within 180 days of well plugging. The reclamation work must be in accordance with the surface use plan and any pertinent site-specific COAs.
6. Disturbed lands will be re-contoured back to conform with existing undisturbed topography. No depressions will be left that trap water or form ponds.

7. 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.
8. 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 4" below the compacted layer. The rippers are to be no farther than 24 inches apart.
9. Distribute the topsoil evenly over all disturbed areas. Prepare the seedbed and seed with approved seed mix.
10. Soil fertility testing and the addition of soil amendments may be required to stabilize some disturbed lands.
11. Any mulch utilized for reclamation needs to be certified weed free.
12. 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