Yates Petroleum Corporation
Siracco Plan of Development
Modified Decision and Conditions of Approval

BACKGROUND

On May 19, 2010, the Bureau of Land Management (BLM), Buffalo Field Office (BFO) received from the BLM Wyoming State Office a decision on a State Director Review (SDR) for the Yates Siracco POD (SDR No. WY-2010-011). The decision was affirmed in part and remanded in part. Only the remanded portions of the decisions will be addressed in this document.

Yates has requested a review of the September 2, 2009 decision by the BFO; this decision is documented in the Decision and Application for Categorical Exclusion under Section 390 of the Energy Policy Act of 2005 (390CX) for the Sirocco Plan of Development (Sirocco POD).

The Sirocco POD is located in the Powder River Basin (PRB) of northeast Wyoming, and the project area includes fee, State, and Federal surface and mineral estate; most of the fee surface estate has been segregated from a Federal mineral estate.

Yates applied to the BFO for approval of four Applications for Permit to Drill (APDs) at four well locations within the Sirocco POD. The BFO conducted onsite inspections in accordance with Onshore Oil and Gas Order No. 12, and then prepared the Sirocco POD 390CX using a single form to document the categorical exclusion of the four APDs from analysis under the National Environmental Policy Act (NEPA) (CX09-3-018, CX09-3-019, CX09-3-020, and CX09-3-021).

The Sirocco POD is a coalbed natural gas (CBNG) exploration pilot project entailing the construction, drilling, testing, abandonment and reclamation of well locations and appurtenant facilities in order to evaluate the potential for natural gas production from Federal oil and gas leases.

On September 2, 2009, the BFO Field Manager signed the 390CX, authorized the four APDs, and imposed additional COAs for the protection of resources (390 CX at Pages 4-19).

ISSUES

Yates raised 7 issues in their appeal. Five of the issues were remanded all of which required elimination of or a change to the COA's that were originally issued. An amended COA document is attached.

2. Bald eagle protection measures (Site Specific COAs – Wildlife Protective Measures: Number 1)

The BFO was directed to, issue revised COAs following either (1) the programmatic COAs in the 2003 PRB ROD (Pages A-34 to A-35) or (2) protection measures applicable to the site-specific circumstances and in consideration of the most-recent scientific and regulatory information, such as the current guidance from the FWS on their website - with an adequate environmental record of review (43 CFR 3162.5-1(a))17. Pending re-issuance of the revised COAs, the APD approvals remain valid and Yates shall follow those programmatic COAs provided in the 2003 PRB ROD.

After further review of this issue, the BFO will require Yates to follow the programmatic COAs in the 2003 PRB ROD (Pages A-34 to A-35)

3. Bald eagle protection measures (Site Specific COAs – Wildlife Protective Measures – WMP: Numbers 1 and 2)

BFO was directed to remove this COA when issuing the revised COAs.

Per the SDR decision, the COA's WMP 1 & 2 were removed. Removal of these COA's was analyzed via the Documentation of NEPA Adequacy (DNA) process. Under part D of the DNA form (Determination of NEPA Adequacy), we identified that removing these COA's and leaving the water tanks in place result

in proposed actions and effects that were not covered by the Kingsbury IV Environmental Assessment (EA). Therefore, BLM is unable to use the statutory 390 CX to authorize use of the water tanks for the Sirocco POD. Since the statutory 390 CX cannot be used, there is no NEPA analysis authorizing use of the tanks. As a result, the approval of the use of these temporary water storage tanks is revoked until the appropriate NEPA document can be prepared.

To resolve this NEPA issue, BLM needs additional information from Yates so that the analysis can be completed. Yates will need to submit a sundry notice with the request to use the tanks along with a complete description of how they intend to use the tanks for testing purposes. The sundry notice should include frequency of travel to and from the tanks. BFO will prepare the appropriate NEPA document to analyze the tank use and identify any necessary COA's.

4. Mowing limitations (Site Specific COAs – General: Number 9)

This matter was remanded to the BFO for further analysis, with the instruction to consider if limiting mowing distances would result in the potential for increased risks at the well site. The BFO will revise this COA to ensure safe operations.

This COA has been removed. Yates did not include in their Master Surface Use Plan (MSUP) any mention of mowing. The BLM's intent of limiting the mowing distance was to disturb a minimum amount of sage-grouse habitat. The issue of mowing raised by Yates is relative to safety. Rather than BFO determining what constitutes a safe amount of mowed sagebrush on these locations, we ask that Yates mow only that amount of sagebrush that is necessary but yet allow for safe operations around the wells. We also ask that Yates consider the need for mowing in their MSUP and include it in their plans as necessary.

5. Biological opinion conservation measures (Standard COAs – General: Number 8)

The BFO is instructed to remove this COA when issuing revised COAs for the Sirocco POD.

This COA has been removed.

6. Limitations on road use (Site Specific COAs – General: Number 12)

The BFO was instructed to issue a revised COA that either (1) eliminates this COA (since this limitation has already been acknowledged by Yates) or (2) clarifies that activities authorized in the Sirocco POD for development of federal leases would be prohibited on roads other than those road segments approved in the decision.

This COA has been removed.

ADMINISTRATIVE REVIEW AND APPEAL: Under BLM regulations, this decision is subject to administrative review in accordance with 43 CFR 3165. Any request for administrative review of this decision must include information required under 43 CFR 3165.3(b) (State Director Review), including all supporting documentation. Such a request must be filed in writing with the State Director, Bureau of Land Management, P.O. Box 1828, Cheyenne, Wyoming 82003, no later than 20 business days after this Decision Record is received or considered to have been received.

Any party who is adversely affected by the State Director's decision may appeal that decision to the Interior Board of Land Appeals, as provided in 43 CFR 3165.4.

ACTING Field Manager: Paul Beels Date: 6/22/10

Surface Use
Modified Conditions of Approval

POD Name: Sirocco

Operator: Yates Petroleum

List of Wells:

CX #	Well Name	Well #	Qtr/Qtr	Section	TWP	RNG	Lease #
070-09-3-018	Sirocco Draft	8	NESW	28	46N	77W	WYW146305
070-09-3-019	Sirocco	1	NENW	28	46N	77W	WYW134919
070-09-3-020	Sirocco Cloudburst	2	NESW	31	46N	77W	WYW129554
070-09-3-021	Sirocco Whisk	4	SWSW	31	46N	77W	WYW130108

List of approved Right-of Ways: WYW-170037

I 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

1. 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.
2. 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.

Wetland/Riparian

1. Wetland areas will be disturbed only during dry conditions (that is, during late summer or fall), or when the ground is frozen during the winter.
2. No waste material will be deposited below high water lines in riparian areas, flood plains, or in natural drainage ways.
3. The lower edge of soil or other material stockpiles will be located outside the active floodplain.
4. Disturbed channels will be re-shaped to their approximate original configuration or stable geomorphological configuration and properly stabilized.
5. Reclamation of disturbed wetland/riparian areas will begin immediately after project activities are complete.

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. The Programmatic Mitigation Measures and Terms and Conditions of the Biological Opinion for Bald Eagles will apply.
   a. This affects the following wells and infrastructure:

Township/Range	*Section*	*Affected Wells and Infrastructure*
46/77	31	Sirocco Cloudburst 2, Sirocco Whisk 4, and associated infrastructure in Section 31.

Mountain Plover

1. 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.

Ute Ladies'-tresses Orchid

1. Moist soils near wetlands, streams, lakes, or springs in the project area will be promptly revegetated if construction activities impact the vegetation in these areas. Revegetation will be designed to avoid the establishment of noxious weeds.

Air Quality

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.

II. Site Specific Conditions of Approval

General

1. All changes made at the onsite will be followed. The changes have all been incorporated into the operator's POD.
2. The access roads into Sirocco POD are kept at minimum design standards to reduce surface disturbance for the drilling of four exploratory wells. If further development of these leases is proposed at a later date the roads may need to be re-engineered to meet the additional daily traffic requirements.
3. Please contact Travis Kern, Natural Resource Specialist, at (307) 684-1074, Bureau of Land Management, Buffalo, if there are any questions concerning these COAs.

Surface Use

Well Name	Well #	Qtr/Qtr	Section	T/R	Notes
Sirocco Draft	8	NESW	28	46/77	30 day stabilization required at this location due to poor reclamation potential.
Sirocco	1	NENW	28	46/77	30 day stabilization required at this location due to poor reclamation potential.
Sirocco Cloudburst	2	NESW	31	46/77	Moved East to location less visible to Bald Eagle habitat on the Powder River. 30 day stabilization required at this location due to poor reclamation potential.
Sirocco Whisk	4	SWSW	31	46/77	The work area will be staked 200 x 200 feet and a best fit mowing radius applied at this native pad location. 30 day stabilization required at this location due to poor reclamation potential.

4. All permanent above-ground structures (e.g., production equipment, tanks, etc.) not subject to safety requirements will be painted to blend with the natural color of the landscape. The paint used will be a color which simulates "Standard Environmental Colors." The color selected for the Sirocco POD is Covert Green, 18-0617 TPX (Pantone for Architecture).
5. Provide a minimum 4" of aggregate where grades exceed 8%.
6. Drainage laterals in the form of culverts or waterbars shall be placed according to the following spacing:

Grade	Drainage Spacing
2-4%	310 ft
5-8%	260 ft
9-12%	200 ft
12-16%	150 ft

7. The operator will drill seed on the contour to a depth of 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 shallow sandy ecological site seed mix:

Species	% in Mix	Lbs PLS*
Thickspike Wheatgrass (Elymus lanceolatus ssp. lanceolatus)	20	2.4
Bluebunch Wheatgrass (Pseudoroegneria spicata ssp. Spicata)	15	1.8
Prairie sandreed (Calamovilfa longifolia)	30	3.6
Needleandthread (Hesperostipa comata ssp. comata)	20	2.4

Species	% in Mix	Lbs PLS*
Prairie coneflower (Ratibida columnifera)	5	0.6
White or Purple Prairie Clover (Dalea candidum, purpureum)	5	0.6
Scarlet Globemallow (Sphaeralcea coccinea) / or ***Blue flax*** (Linum lewisii)	5	0.6
Chapter 1 Totals	**100%**	**12 lbs/acre**

8. All of the well locations and access road/corridors in the project area have been identified to have limited reclamation potential 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.
9. Non-constructed well pad disturbances (e.g. driving on sage brush) will be kept to a 200 x 200 or smaller to reduce impacts to sage brush.
10. The operator will maintain all existing improved roads in the Sirocco POD in accordance with guidelines contained in the BLM/FS Gold Book, 4th Edition "Surface Operating Standards and Guidelines for Oil and Gas Exploration and Development," and/or the Road Standards in the BLM Manual 9113.
11. The operator will maintain well drilling, completion and associated construction operations within the staked area or on the constructed well pad.
12. The existing local road identified in the Sirocco POD MSUP has calved off along the Powder River (T46N:R77W Section 30). Yates is not permitted to use the for-mentioned road to access the following two wells until the road is realigned or fixed by Williams Production RMT Company.

	Well Name	Well #	Qtr/Qtr	Section	TWP	RNG	Lease #
1	Sirocco Cloudburst	2	NESW	31	46N	77W	WYW129554
2	Sirocco Whisk	4	SWSW	31	46N	77W	WYW130108

13. The existing local road to the Sirocco Cloudburst must have the head-cut, identified at the onsite, mitigated prior to commencement of drilling operations.
14. The operator is responsible for having a licensed professional engineer certify that the actual construction of roads meets the design criteria and is constructed to BLM standards. When construction is complete, a post construction inspection form will be filled out by a licensed professional engineer and submitted to the BLM for review.

Water Management

1. The operator will submit two copies of the Wyoming Pollution Discharge Elimination System (WYPDES) Permit to the BLM when it becomes available.

Wildlife Protective Measures

1. The following conditions will reduce impacts to nesting raptors:
   a. No surface disturbing activity shall occur within ½ 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 affects the following wells and infrastructure:

Township/Range	*Section*	*Affected Wells and Infrastructure*
46/77	28	All project related activities within this section.

b. Surveys to document nest occupancy shall be conducted by a biologist following BLM protocol, between April 15 and June 30. All survey results shall be submitted in writing to a Buffalo BLM biologist. Surveys outside this window may not depict nesting activity. If a survey identifies active raptor nests, a ½ mile timing restriction will be implemented. The timing buffer restricts surface disturbing activities within ½ mile of occupied raptor nests from February 1 to July 31.
c. Nest productivity checks shall be completed for all raptor nests within the Sirocco POD listed in the table below. The occupancy checks shall be completed for the first five years following project completion. The productivity checks shall be conducted no earlier than June 1 or later than June 30 and any evidence of nesting success/production shall be recorded. Survey results will be submitted to a Buffalo BLM biologist in writing no later than July 31 of each survey year.

BLM ID#	Species	UTMs (NAD83)	Legal Location
3080	Long Eared Owl	410520E 4864900N	SWNE Sec. 28 T46N, R77W

2. The following conditions will alleviate impacts to sage grouse:
   a. No surface disturbing activities are permitted between March 1 and June 15. This condition will be implemented on an annual basis for the duration of surface disturbing activities. This timing limitation will affect all locations and infrastructure in the Sirocco POD.
   b. A sage-grouse lek survey will be conducted for all known leks within 2 miles of the POD by a biologist following the most current WGFD protocol. All survey results shall be submitted annually, in writing, to a Buffalo BLM biologist by 31 July. Currently, no leks are recorded within 2 miles of the Sirocco POD, but this condition will include any new leks discovered over the life of the project.
   c. If an active lek is identified and construction has not been completed, surface disturbance and occupancy within 0.25 miles of the center of the lek will be prohibited.

III Standard Conditions of Approval

A. General

1. 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.

2. 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.
3. 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.).
4. 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.
5. By November 1 each year, companies will provide 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 where construction and development have been completed.
6. 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.
7. Wildlife species are dynamic and new individuals may have moved into the Sirocco POD area after the initial wildlife surveys were completed. The Record of Decision for the PRB FEIS includes a programmatic mitigation measure that states, "The companies will conduct clearance surveys for threatened and endangered or other special-concern species at the optimum time". The measure requires companies to coordinate with the BLM before November 1 annually to review the potential for disturbance and to agree on inventory parameters. Should this project not be completed by January 15, and surface disturbance is planned for that year, a Yates Petroleum company representative will coordinate with the BLM to discuss required surveys.
8. 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.
9. All contractors will have a copy of the pod map and conditions of approval with them at all times.

B. Construction

1. A pre-construction field meeting shall be conducted prior to beginning any dirt work approved under this POD. The operator shall contact the BLM Authorized Officer, Travis Kern @ 307-684-1074 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. The operator will limit vegetation removal and the degree of surface disturbance wherever possible. Where surface disturbance cannot be avoided, all practicable measures will be utilized to minimize erosion and stabilize disturbed soils.
3. 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.
4. Remove all available topsoil (depths vary from 4 inches on ridges to 12+ inches in bottoms) 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.
5. 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.
6. Construct the backslope no steeper than 1½:1, and construct the foreslope no steeper than 2:1, unless otherwise directed by the BLM Authorized Officer.
7. 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.
8. With the overall objective of minimizing surface disturbance and retaining land stability and productivity, the operator shall utilize equipment that is appropriate to the scope and scale of work being done for roads and well pads (utilize equipment no larger than needed for the job).
9. All overhead power lines shall be built to protect raptors, including bald eagles, from accidental electrocution using the most recent edition of "Suggested Practices for Raptor Protection" by the Avian Power Line Interaction Committee (2006 edition or most recent edition) and any additional practices provided by the FWS. It should be noted that raptor protection can be achieved through insulation and/or wire spacing and that there are multiple configurations capable of protecting raptors.
10. The operator shall utilize wheel trenchers or ditchers to construct all pipeline trenches, except where extreme topography or other environmental factors preclude their use.
11. 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.

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12. 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.
13. 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.

14. The reserve pit will be constructed so that at least half of its total volume is in solid cut material (below natural ground level).
15. 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.
16. The minimum diameter for culverts will be 18 inches. However, all culverts will be appropriately sized in accordance with standards in BLM Manual 9113.
17. Construction and other project-related traffic will be restricted to approved routes. Cross-country vehicle travel will not be allowed.
18. Maximum design speed on all operator-constructed and maintained roads will not exceed 25 miles per hour.
19. 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.
20. Pipeline trenches shall be compacted during backfilling. Pipeline trenches shall be routinely inspected and maintained to ensure proper settling, stabilization and reclamation.
21. 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.
22. 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.
23. 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.
24. Weed educational material will be reviewed with operators during pre-construction on-site meetings with operators, subcontractors, and landowners and will also be attached to approved APDs and PODs.
25. Companies will contact the counties to pursue development of maintenance agreements to ensure county roads are adequately maintained for the projected increase in use.

C. Operations/Maintenance

1. 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.
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.
3. Confine all equipment and vehicles to the access road(s), pad(s), and area(s) specified in the approved APD or POD.
4. All waste, other than human waste and drilling fluids, will be contained in a portable trash cage. This waste will be transported to a State approved waste disposal site immediately upon completion of drilling operations. No trash or empty barrels will be placed in the reserve pit or buried on location. All state and local laws and regulations pertaining to disposal of human and solid waste will be complied with.
5. Rat and mouse holes shall be filled and compacted from the bottom to the top immediately upon release of the drilling rig from the location.
6. 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.
7. Sewage shall be placed in a self-contained, chemically treated porta-potty on location.
8. 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
9. 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.
10. 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.
11. 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.

12. 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, 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 from closing a pit before it is sufficiently dry.
13. Operators are advised that prior to installation of any oil and gas well production equipment which has the potential to emit air contaminants, the owner or operator of the equipment must notify the Wyoming Department of Environmental Quality, Air Quality Division (phone 307-777-7391) to determine permit requirements. Examples of pertinent well production equipment include fuel-fired equipment (e.g., diesel generators), separators, storage tanks, engines and dehydrators.
14. If this well is drilled during the fire season (June-October), the operator shall institute all necessary precautions to ensure that fire hazard is minimized, including but not limited to mowing vegetation on the access route(s) and well location(s), keeping firefighting equipment readily available when drilling, etc.

D. Dry Hole/Reclamation

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 platform 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 to a depth of 4-to-6 inches following the contour.
6. 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
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7. 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.

8. A Notice of Intent to Abandon and a Subsequent Report of Abandonment must be submitted for abandonment approval.
9. For performance bond release approval, a Final Abandonment Notice (with a surface owner release letter on split-estate) must be submitted prior to a final abandonment evaluation by BLM.
10. 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

E. 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. Production facilities (including dikes) must be placed on the cut portion of the location and a minimum of 15 feet from the toe of the back cut unless otherwise approved by the BLM Authorized Officer.
4. 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.
5. Distribute stockpiled topsoil evenly over those areas not required for production and reseed as recommended.
6. 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.
7. 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.

8. If not already required prior to constructing and drilling the well location, the operator shall immediately upgrade the entire access road to BLM standards (including topsoiling, crowning, ditching, drainage culverts, surfacing, etc.) to ensure safe, environmentally-sound, year-round access. This requirement does not supercede or apply where specific road requirements are addressed in the APD/POD surface use plan (e.g., two track road, spot upgrade, etc.)
9. Waterbars shall be installed on all reclaimed pipeline corridors per the guidelines in D #12.