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Dear Operator,

A meeting was held December 16, 2004 at the Buffalo Field Office to discuss the Fortification Creek Special Management Area (FCSMA). The area was designated in the Buffalo Field Office Resource Management Plan (RMP, 1985) as a "Special Management Area" because it contains one or a combination of important resources such as wildlife habitat, high visual quality, a wilderness study area, steep slopes and erosive soils, and significant cultural, historic or paleontological values. We stated at the meeting that our goal is to maintain/protect the values which are present in the Fortification Creek area while allowing oil and gas development activities.

We assembled a team within the office to identify what lease stipulations and conditions of approval were identified in the Fortification Creek Management Plan written and adopted as part of the 1985 RMP. The 2003 Powder River Basin Oil and Gas EIS and Record of Decision also provided various conditions of approval which are also applicable to development within the FCSMA.

Attached, please find the list of lease stipulations, conditions of approval, and best management practices identified by the team. Please incorporate, as appropriate, those stipulations, conditions of approval and best management practices which apply to your project when planning your POD submissions. This will speed up the POD review and approval process. If you do not incorporate appropriate actions, they may be applied as COA's during the POD approval process.

As we stated at the December meeting, we are willing to work with you to develop plans which meet our objective of maintaining the values we have while allowing oil and gas development to move forward. If you have questions or concerns please call Larry Gerard or Richard Zander at 307-684-1100.

Sincerely,

/s/ **Chris E. Hanson**

Chris E. Hanson
Field Manager

Enclosure

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**MANAGEMENT PRACTICES TO REDUCE IMPACTS
ASSOCIATED WITH OIL AND GAS DEVELOPMENT IN THE FORTIFICATION
CREEK SPECIAL MANAGEMENT AREA**

The following management practices should be considered in planning CBNG projects in the Fortification Creek Special Management Area. Some of these measures, if not incorporated into planning for plans of development, may be applied as Conditions of Approval at the time of permit approval.

These measures are from various sources including the Fortification Creek Management Plan, the Powder River Basin Oil and Gas EIS/ROD and "Recommendations for Development of Oil and Gas Resources within Crucial and Important Wildlife Habitats", Wyoming Game and Fish Department 2004.

Pre-planning

1. Well spacing will be 160 acres unless there is satisfactory justification for alternate spacing.
2. Consult the appropriate state and federal wildlife agencies early in the process, during pre-planning exercises if possible
3. Design configurations of oil and gas development to avoid or reduce unnecessary disturbances, wildlife conflicts, and habitat impacts. Where possible, coordinate planning among companies operating in the area.
4. Identify important, sensitive, or unique habitats and wildlife in the area. To the extent feasible, incorporate mitigation practices that minimize impacts to these habitats and resources.
5. If geologically and technically feasible, plan the pattern and rate of development to avoid the most important habitats and generally reduce the extent and severity of impacts.
6. Cluster drill pads, roads and facilities in specific, "low-impact" areas.
7. The Fortification Creek SMA is classified as a Class III visual resource management area. The objective of Class III is to provide for management activities that may contrast with the basic landscape elements, but remain subordinate to the existing landscape character. Activities may be visually evident, but should not be dominant.
8. Surface use or occupancy will be strictly controlled or if absolutely necessary prohibited on slopes exceeding 25%.
9. Companies will coordinate their projects in order to utilize common corridors for roads, pipelines, power, and facilities.
10. Develop a travel plan that minimizes the amount of vehicular traffic needed to monitor and service wells and other facilities.

Surface water

1. Operators will be required to develop water handling infrastructure as a joint effort. Multiple facilities, similar in nature, will not be considered in any part of the watershed. This will require operators to share pipelines, treatment facilities, discharge points, etc.
2. Operators will consider water handling methods other than direct discharge or storage. Some options will include:

- a. Treatment of produced water with subsequent direct discharge to the Powder River.
 - b. Treating the water and beneficially using it for irrigation.
 - c. Piping the produced water out of the (SMA).
3. Locate discharge points in areas that will minimize erosion and impacts to the receiving channel, existing improvements, and downstream users. Locate discharge points in stable, low gradient drainage systems and below active head cuts, when possible. If discharge is located above a head cut, mitigation measures will be required by the BLM Authorized Officer on a site specific basis. Some mitigation measures will require engineering design.
 4. All discharge points will require energy dissipation measures.
 5. Discharge points may not be authorized by BLM regardless of NPDES status or previous use. Sites may be moved or otherwise mitigated by the BLM Authorized Officer during onsite inspections where environmental issues exist.
 6. Cumulative produced water discharge must not exceed the naturally occurring 2 year peak flow of the receiving channel.
 7. Discharge points will not be located in playas or enclosed basins unless it can be demonstrated that it can be done without resulting in adverse impacts. Discharges into valley bottoms with no defined low-flow channel will generally not be allowed, but will be reviewed on a site-specific basis.
 8. Direct discharge to drainages high in basins will not be allowed. Proposed direct discharge sites will be downstream of areas with severe erosion potential and near the confluence of major drainages.

Channel Crossings

1. Minimize channel disturbance as much as possible by limiting pipeline and road crossings.
2. Avoid running pipelines and access roads within floodplains or parallel to a stream channel.
3. 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.
4. Channel crossings by pipelines will be constructed so that the pipe is buried at least four feet below the channel bottom.
5. 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.

Impoundments

1. Concerns regarding the quality of the discharged CBM water on downstream irrigation use may require operators to increase the amount of storage of CBM water during the irrigation months and allow more surface discharge during the non-irrigation months.

2. Operators will design produced water handling systems that minimize the need for containment structures (reservoirs or pits). Containment structures in excess of what can be beneficially used by landowners or wildlife will not be considered.
3. The operator will be required to provide reclamation bonds in the amount specified by a qualified Professional Engineer for the impoundments to be used for the management of CBNG water.
4. The operator will supply a copy of the complete approved SW-4, SW-3, or SW-CBNG permits to BLM as they are issued by WSEO for these impoundments.
5. Any stream crossing of a pipeline should be protected by installation of automatic shutoff valves.
6. Pipeline crossings can be installed through ephemeral streams by trenching. Use appropriate size riprap to stabilize stream banks. Place riprap from the channel bottom to the top of the normal high water line on the bank at all stream crossings. We recommend double-ditching techniques to separate the top one foot of stream bottom substrate from deeper soil layers. Reconstruct the original layers by replacing deeper substrate first.
7. Locate and construct all structures crossing intermittent and perennial streams such that they do not decrease channel stability or increase water velocity.

Stream Habitats and Riparian Corridors

1. Surface use or occupancy will be strictly controlled or if absolutely necessary prohibited within 500 feet of surface water, riparian areas, or wetlands.

Should the need for disturbance in these areas be necessary the following should be considered and may be applied:

2. Avoid stripping riparian canopy or stream bank vegetation if possible. It is preferable to crush or shear streamside woody vegetation rather than completely remove it. Any locations from which vegetation is stripped during installation of stream crossings, should be revegetated immediately after the crossing is completed.
3. Hydrostatic test waters released during pipeline construction could cause alterations of stream channels, increased sediment loads and introduction of potentially toxic chemicals or invasive species into drainages. Avoid discharging hydrostatic test waters directly to streams. Release these waters first into a temporary, sediment retention basin if the concentration of total suspended solids is significantly higher than in the receiving water. Dewater temporary sedimentation basins in a manner that prevents erosion.
4. Locate pipelines that parallel drainages, outside the 100-year floodplain. Construct pipeline crossings at right angles to all riparian corridors and streams to minimize the area of disturbance.
5. Use the minimum practical width for rights-of-way where pipelines cross riparian areas and streams.
6. Measures will be taken to ensure that cottonwood trees are not impacted by CBNG production. Options to accomplish this may include:
 - Locating discharge points below susceptible trees.

- Routing flow paths away from susceptible trees.
7. For any jurisdictional wetlands identified that may be impacted, a detailed mitigation plan will be developed during the APD/POD or sundry notice approval process. Federal requirements to replace all impacted wetlands will mitigate this loss, so environmental impacts will occur only during the life of the project (including reclamation).
 8. Any fences used in wetland areas should be placed well back from the wetlands to prevent waterfowl mortalities and should be constructed to standards that allow big game movement.
 9. Power line corridors will avoid wetlands, to the extent possible, in order to reduce the chance of waterfowl hitting the lines. Where avoidance can't occur, the minimum number of poles necessary to cross the area will be used.
 10. 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.
 11. No waste material will be deposited below high water lines in riparian areas, flood plains, or in natural drainage ways.
 12. The lower edge of soil or other material stockpiles will be located outside the active floodplain.
 13. Drilling mud pits will be located outside of riparian areas, wetlands, and floodplains, where practical.
 14. Disturbed channels will be re-shaped to their approximate original configuration or stable geomorphological configuration and properly stabilized.
 15. Reclamation of disturbed wetland/riparian areas will begin immediately after project activities are complete.

Roads and Travel

1. Use existing roads and two-tracks if they are sufficient and not within environmentally sensitive areas. Use corridors to the maximum extent possible; roads, power, gas and water lines should utilize the same corridor wherever possible. Utilize the guidance document that was presented at the February 8th CBNG Open House in Gillette. (Road Design and Transportation Planning In the Powder River Breaks for Applications for Permit to Drill/Plans of Development.
2. Construct the minimum number and length of roads necessary.
3. Use common roads to the extent reasonable. The main road corridor for access and compression facilities will be the Montgomery, Hayden and Echeta county roads.
4. Coordinate road construction and use among companies operating in the same oil and gas field.
5. Design roads to an appropriate standard no higher than necessary to accommodate their intended purpose. Rights-of-way clearing for access roads, prior to construction, shall be limited to 20 feet on each side of the centerline.
6. Design roads with adequate structures or features to prohibit or discourage vehicles from leaving the roads.
7. Salvage topsoil from all road construction and re-apply during interim and final reclamation.
8. Where feasible, locate all roads below ridgelines or behind topographic features (knolls, rises) to minimize the zone of visual and auditory effect.

9. Locate roads away from bottoms of drainages, which often provide the most important sources of cover and forage for wildlife.
10. Construct road crossings at right angles to all riparian corridors and streams to minimize the area of disturbance. In situations where this is not possible, never straighten or otherwise channelize a stream in order to create a right-angle crossing.
11. Design road crossings of streams to allow fish passage at all flows. Types of crossing structures that minimize aquatic impacts, in descending order of effectiveness, are: a) bridge spans with abutments on banks; b) bridge spans with center support; c) open bottomed box culverts; and d) round culverts with the bottom placed no less than one foot below the existing stream grade. Perched culverts block fish passage and are unacceptable in any stream that supports a fishery.
12. Locate and construct all structures crossing intermittent and perennial streams such that they do not decrease channel stability or increase water velocity.
13. Use a variety of native grasses and forbs to establish effective, interim reclamation on road shoulders and borrow areas.
14. OHV use is limited to designated or seasonal roads only and restricted to a seasonal limitation in elk crucial winter and calving range. From Dec 1 to April 1 and calving May 1 to June 15th
15. OHV travel will be prohibited on wet soils and on slopes greater than 25% if damage to vegetation, soils, or water quality would result.
16. The operator shall restrict travel on two-track roads (casual use) during periods of inclement weather of spring thaw when the possibility exists for surface damage from excessive rutting.
17. The operator will sign any newly constructed roads to BLM standard. The signs will read "Authorized Vehicles Only".
18. After the completion of any new well access roads, the road will be reclaimed to a two-track if appropriate.
19. The operator will sign any new corridors and/or pipelines as "No Motor Vehicles Allowed, Reclamation in Progress."
20. Prohibit or substantially limit traffic during high wildlife use hours (within 3 hours of sunrise and sunset) to the extent possible.
21. Use pipelines to transport condensates off site, or install larger capacity storage tanks when frequent truck trips would impact habitat effectiveness.
22. Transmit instrumentation readings from remote monitoring stations to reduce maintenance traffic.
23. Post speed limits on all access and maintenance roads to reduce wildlife collisions and limit dust: 20-30 mph is adequate in most cases.
24. Provide adequate inspection to ensure that the project is constructed as approved. Submit to the BLM a contact who will be responsible for construction oversight.
25. Remove debris/sediment from the entrance of culverts to prevent plugging and overtopping.
26. Clean ditches and reshape when necessary to maintain adequate flow capacity. Do not grade ditches that do not need it.
27. Avoid disturbing soil vegetation if not necessary. Leave as much vegetation in ditches, on road shoulder areas, and on cut or fill slopes as possible without creating safety concerns.

28. Stake culvert locations 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.
29. The minimum cover over culverts will be 12" or one-half the diameter whichever is greater. Drainage laterals in the form of culverts or water bars shall be placed according to the following spacing:

<u>Grade</u>	<u>Drainage Spacing</u>
2-4%	310 ft
5-8%	260 ft
9-12%	200 ft

Well Locations

1. If geologically and technically feasible, drill multiple wells from the same pad using directional (horizontal) drilling technologies.
2. Disturb the minimum area (footprint) necessary to efficiently drill and operate a well.
3. Salvage topsoil from all well pad construction and re-apply during interim and final reclamation.
4. If geologically and technically feasible, locate well pads in the least environmentally sensitive areas, At least 500 feet away from riparian habitats, streams or drainages, below ridge lines, away from important sources of forage, cover, reproductive habitats, winter habitats, parturition areas, brood-rearing habitats, etc.
5. Use a variety of native grasses and forbs to establish effective, interim reclamation on all well pads and associated disturbances.
6. Line reserve pits with a suitable, impermeable barrier to eliminate possible contamination of soil and groundwater.
7. Design drill pad sites to drain excess storm water and other fluids into a properly sized reserve pit. The pit should have adequate capacity to intercept and hold excess precipitation. Discharges from the pit should meet NPDES standards or otherwise assure the discharged water is of suitable quality.

Ancillary Facilities

1. Locate facilities including tanks, transfer stations, shops, equipment shelters, utility towers, etc. in the least environmentally sensitive areas, well away from riparian habitats, streams or drainages, below ridge lines, away from important sources of forage, cover, reproductive habitats, winter habitats, parturition areas, brood-rearing habitats, etc.
2. Salvage topsoil from all facilities construction and re-apply during interim and final reclamation.
3. Design all facilities such that they will not be used as perching or nesting substrates by raptors, crows, and ravens in open prairie or shrub-steppe environments.
4. Use existing utilities, road and pipeline corridors to the extent feasible.

5. All gas and water pipelines and electrical cables will be installed in disturbance corridors, a common trench, placed within the access roadways.
6. To maintain aesthetic values, all semi-permanent facilities will require painting or camouflage to blend the natural surroundings. The paint selection or method of camouflage will be subject to approval by the Bureau of Land Management.
7. Establish effective, interim reclamation on all surface disturbances associated with ancillary facilities, including equipment staging areas. Interim reclamation should be achieved using a variety of native grasses and forbs.

Noise

1. Minimize noise generally. All compressors, vehicles, and other sources of noise should be equipped with effective mufflers or noise suppression systems (e.g., "hospital mufflers").
2. To minimize the effects of continuous noise on bird populations, reduce noise levels to 86 dBA or less at 50 feet, particularly during the bird nesting season (1 April through 30 June). Constant noise generators should be located far enough away from sensitive habitats or muffled such that noise reaching those habitats is less than 49 dBA.

Human Activity & Secondary Effects

1. All employees should be aware of BMPs, and COA's for the project and receive environmental awareness training.
2. Employees should be instructed to avoid walking away from vehicles or facilities into view of wildlife, especially during winter months and reproductive (courtship, nesting) seasons.
3. Employees should not be allowed to carry firearms while on the job or riding in company vehicles.

Pollutants, Toxic Substances, Fugitive Dust, Erosion and Sedimentation

1. Avoid exposing or spilling hydrocarbon products on the surface. Oil pits will not be used, but if absolutely necessary, they should be enclosed in small-mesh netting and fence to prevent entrapment of birds and mammals. All netting and fence should be maintained and kept in serviceable condition.
2. Limit the permitted discharge of produced water to those areas where it can be beneficially used by wildlife, provided water quality standards for wildlife and livestock are met. Produced water will not be discharged on the surface within big game crucial winter ranges or near complexes of sage grouse leks. New water sources within crucial winter ranges encourage yearlong use by livestock and wildlife, and may result in reduced or depleted forage during winter. Additional water sources near lek complexes could increase vulnerability of sage grouse to mosquito-borne, West Nile virus. However, produced water of suitable quality may be used for supplemental irrigation to improve reclamation success.
3. Employ erosion control practices and sediment retention structures to prevent sediment transport off site during precipitation events and runoff.
4. Use dust abatement procedures including reduced speed limits, and application of [environmentally compatible] chemical suppressants or suitable quality water.

Monitoring and Environmental Response

1. Monitor conditions or events that may indicate environmental problems. Such conditions or events can include any significant chemical spill or leak, detection of multiple wildlife mortalities, sections of roads with frequent and recurrent wildlife collisions (especially big game or sage grouse), poaching and harassment incidents, severe erosion into tributary drainages, raptor electrocutions, structures associated with frequent bird or bat collisions, migration impediments (e.g., pronghorn concentrating along a fence), wildlife entrapment, sick or injured wildlife, or other unusual observations.
2. Promptly report observations of potential wildlife problems to the regional office of the WY Game and Fish Dept. and, as applicable, the U.S. Fish and Wildlife Service.

Research and Special Studies

1. Where questions or uncertainties exist about the degree of impact to specific resources, or the effectiveness of mitigation, companies should consider funding or cost-sharing special studies to collect data for evaluation and documentation.

Noxious Weeds

1. Control noxious and invasive plants that become established along roads, on well pads, or adjacent to other facilities.
2. Clean and sanitize all equipment brought in from other regions. Seeds and propagules of noxious plants are commonly imported by equipment and mud clinging to equipment.
3. Request employees to clean mud from boots/work shoes before traveling to the work site, to prevent importation of noxious weeds.

Interim Reclamation

1. Establish effective, interim reclamation on all surfaces disturbed throughout the operational phase of the well field. A variety of native grasses and forbs will be used. Non-native vegetation is unacceptable for any purpose, including surface stabilization. Continue to monitor and treat reclaimed surfaces until satisfactory plant cover is established.
2. Where pipeline and power line trenching is on ridges, topsoil with vegetation shall be stripped and stockpiled temporarily until lines are laid in ditch and the ditch is backfilled. Then the topsoil shall be respread over the backfill and the topsoil shall be reseeded. The areas identified as highly erosive and or fragile soils shall after seeding have a protective cover applied to prevent soil erosion and to prevent the seed from blowing or washing away.
3. Complete reclamation on all disturbed areas within one growing season, or implement temporary measures until the next growing season.
4. Limit livestock grazing on reclaimed areas for two growing seasons after final reclamation is complete. Grazing controls will vary by site but might include herding, fencing, deferred use, or supplemental feeding.

5. Require a protective surface treatment on Sandy, Sands, and Shallow Ecological Sites. Require a protective surface treatment on side slopes to steep for tractor seeding horizontal to disturbance. Require a protective surface treatment on sites with side slopes greater than 25 foot of horizontal distance on each side regardless of soil type or Ecological Site.
6. Re-treat all reclaimed areas of unsuccessful reclamation. Re-treating will vary by site and initial reclamation success, but may include invasive species control, re-seeding the site with other native species, or the same native species under more favorable environmental conditions. Re-treatment may also involve additions of fertilizers or soil amendments and protective cover such as mulch, matting or netting.
7. Cool season species can be planted from November 1st to March 15th as a dormant planting. If planting in the spring, plant in late March or early April.
8. All erosive and or fragile soils shall be kept stabilized to prevent erosion until revegetation has stabilized the soils.

Final Reclamation

1. Salvage topsoil during decommissioning operations and reapply to reclaimed surfaces.
2. Replant a mixture of forbs, grasses, and shrubs that are native to the area and suitable for the specific ecological site.
3. Restore vegetation to achieve numeric standards of cover, composition, and diversity that are commensurate with the ecological site.
4. Continue to monitor and treat reclaimed areas until plant cover, composition, and diversity standards have been met.
5. Reclaimed sites depending on their size and magnitude may be fenced to ensure the objectives of the reclamation projects are achieved, however as sites increase in number and size, the management of the livestock will need to be addressed to ensure the objectives of the reclamation projects as well as the objectives of the livestock manager are also met.

TABLE 1. Wildlife Lease Stipulations, and Survey Criteria for Surface Disturbing Activities in the Buffalo Field Office

SPECIES	ACTIVITY	TIMING/ SURFACE USE STIPULATION*	SURVEY DISTANCE FROM ACTIVITY	SURVEY DATES
RAPTORS	NESTING	TLS -FEB.1 to JULY 31	.5 MI.	MAY 1 – JUNE 15 (OCCUPANCY) MAY 1 – JAN 31 (NEST SITES)
SAGE GROUSE	BREEDING GROUND	CSU	.5 MI.	APRIL 7 – MAY 7
SAGE GROUSE	NESTING	TLS – MARCH 1- JUNE 15	2 MI.	
SHARPTAILED GROUSE	BREEDING GROUND	CSU	250 YDS.	APRIL 1 – MAY 15
SHARPTAILED GROUSE	NESTING	TLS – MARCH 1 – JUNE 15	.5 MI.	
BALD EAGLE	NESTING	NSO - .5 MI. TLS – FEB. 1 – AUG. 15 (1 MI.)	1MI..	SAME AS RAPTOR
BALD EAGLE	WINTER ROOST	TLS –NOV.1 – APRIL 1 (1 MI.)	1 MI.	DEC. 1 – FEB. 28
BLACK- FOOTED FERRET	OCCURENCE	NSO	PRAIRIE DOG COLONIES	JULY 1 – OCT. 31 (NOCTURNAL) DEC.1 – MARCH 31 (DIURNAL)
UTE LADIES' TRESSES	OCCURRENCE	AVOIDANCE	PERRENIAL WETLANDS	JULY 15 – SEPT. 15
MOUNTAIN PLOVER	BREEDING/NESTING	NSO - .25 MI.	PREFERRED HABITAT	MAY1 – JUNE 15
ELK	CRUCIAL WINTER RANGE	TLS – DEC. 1 – APRIL 1	EST. HABITAT	
ELK	PARTURITION AREAS	TLS – MAY 1- JUNE 15	EST. HABITAT	

CSU : Controlled Surface Use – Surface occupancy and use are permitted, but are restricted to mitigate effects to particular resources.

NSO: No Surface Occupancy – Neither exploration nor production facilities would be allowed to be constructed.

TLS: Timing Limitation Stipulation -- Construction activities would be restricted or prohibited during certain periods to protect resources.