

APPENDIX B – CONDITIONS OF APPROVAL

Conventional Oil & Gas Well
Thunder Basin National Grassland
Douglas Ranger District

SURFACE PROTECTION, REHABILITATION & OPERATION REQUIREMENTS

Operator: Ballard Petroleum Holdings, LLC.
Lease No.: WYW 141187
Well Name & No.: Wildhorse Federal #14-18
Location: 1,895' FSL & 2,024' FWL, NE 1/4 SW 1/4, Sec 18, T 54N R 69W
County: Campbell County, WY

The latest edition of The Gold Book shall be utilized throughout the life of this project in order to ensure compliance with US Forest Service policy and regulations.

These Conditions of Approval (COAs) are in addition to the stated conditions in the Application for Permit to Drill (APD) Surface Use Plan of Operation (SUPO). If there are conflicts between the SUPO and COAs, the COAs shall apply. In addition, if there are conflicts between The Gold Book and the COAs, the COAs shall apply.

A. DURING CONSTRUCTION AND OPERATION

1. Within the COAs, where notification of or contact with the US Forest Service (Forest Service) is required, Ballard Petroleum Holdings, LLC (the operator) will speak with one of the following personnel at the Douglas Ranger District Office (phone: 307-358-4690): 1) Oil & Gas Project Manager; 2) Minerals Program Manager; 3) District Ranger; or, 4) the Acting District Ranger. The Forest Service person contacted will take the necessary steps to consult with the appropriate resource specialist(s) regarding the situation or information being reported and coordinate any required mitigation efforts with the operator.
2. At least 48 hours before any dirt moving or construction begins on the approved site, the operator will request a pre-construction meeting with the Forest Service. A designated Forest Service inspector or project manager will review the SUPO and COAs with the operator. The meeting may be on site or at another agreed on location.
3. It is the responsibility of the operator to ensure that any and all of their contractors or subcontractors are familiar with and aware of the requirements outlined in the SUPO and these COAs as they apply to this project.
4. The operator is responsible for locating and avoiding any buried utilities within the project area. The Forest Service recommends utilizing One-Call of Wyoming (phone: 1-800-849-2476) in order to locate these buried utilities prior to construction.
5. If snow is on the ground when construction begins, it will be stockpiled separately from the topsoil. Before snow may be removed from any pipeline corridor, the operator will request approval from the Forest Service.
6. The twelve (12) inches of soil material will be removed from all areas to be cut or filled. This topsoil material will be stockpiled at the site and salvaged for reclamation use on all areas of surface disturbance.

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7. Fill slopes shall not be constructed to exceed 3:1.
8. Cut slopes shall not be constructed to exceed 2:1.
9. A closed-loop mud system will be used at the location.
10. All pits will have a minimum of one-half the total depth below the original ground surface at the lowest point within the pit and will be designed to prevent the collection of surface runoff.
11. All pits will be lined with an impermeable liner if permeable subsurface materials are encountered in order to avoid drilling water loss through seepage.
12. All pits must be fenced with sheep-tight fencing on three sides during the drilling and on the fourth side immediately after the rig is removed and the pit is reclaimed so as to effectively keep out wildlife and livestock (see *The Gold Book*). Wooden H-bracing must be constructed at all corners, utilizing six (6) inch diameter wooden posts.
13. Actions to insure oil floating on water does not pose a hazard to wildlife will be implemented. Fluid hydrocarbons within the reserve pit will be promptly removed and disposed of in accordance with State Law. The pit must have overhead flagging or netting installed immediately for wildlife protection until all hydrocarbons have been removed.
14. The proposed well pad would be located immediately adjacent to an existing all-weather road (crowned and ditched, with surface hardened with scoria). The existing road will be maintained according to design standards and guidelines found in the publication titled *Surface Operating Standards and Guidelines for Oil and Gas Exploration and Development* also known as *The Gold Book*, Fourth Edition, 2006. Any drainage structures shall also be constructed according to guidelines in *The Gold Book*.
15. Drilling company signs will be allowed on NFS lands during the construction and drilling phase (out of the public road right-of-way).
16. Any buried electric lines, pipelines or flowlines needed for this project will be co-located within the same trench and/or placed within the minimum safe distance from the edges of the existing road to the greatest extent possible where they cross National Forest System land.
17. Vegetation shall not be removed by scraping with bladed equipment prior to burying any linear utilities associated with this project. Brush hogging, mowing or sawing individual plants is acceptable. Any brush removed during construction will be placed back on the disturbed area after trenching is complete. If any blading is anticipated in order to accommodate the trenching equipment, the operator shall contact the Forest Service immediately and the District Ranger shall send their representative to examine the site prior to any approval for blading being given.
18. Any tree removal shall consist of cutting the trees into 6' lengths and stockpiling near an existing road. All slash shall be stockpiled and/or spread out.
19. Trenched soil created from installing any utility lines shall be backfilled during construction. Pipeline trenching will segregate the topsoil/subsoil. The trench will be filled with the subsoil first and the topsoil mounded over the trench.
20. During the completion phase, all hydraulic fracturing and treatment fluids will be contained in steel tanks and hauled to a State-approved disposal site when no longer needed. No completion fluids will be allowed within the reserve pit.
21. All hydrocarbons produced during the completion and testing phases will be contained in steel tanks and will be accountable to the appropriate agencies.

22. Sewage or "black water" will be confined to chemically-treated portable unit(s) on location and disposed of at a State-approved disposal site upon completion of operations conducted prior to the well going into production.
23. "Grey water" shall be collected in an approved container and hauled off of National Forest System (NFS) lands to be disposed of in a manner which meets all Federal and State regulations.
24. All garbage/trash/drilling debris will be put in an enclosed trash cage and hauled to an approved state-approved landfill facility. Burying trash or trash anywhere on-site or NFS lands will not be allowed. Burning of trash on the location will not be allowed. The cage must be on-site throughout all drilling, testing and completion activities.
25. The rathole and mousehole must be filled-in immediately after the drilling rig is removed for safety.
26. (Sediment control fences may be required) A silt fence consisting of metal T-posts and an appropriate sediment cloth shall be constructed on the down-gradient side of the disturbed area(s). This silt fence is intended to prevent sediment transport down the draw until vegetation becomes established. The silt fence is to remain in place until the Forest Service approves the vegetation and reclamation over the flowline disturbance corridor. The operator shall maintain the silt fence in good working order until such time approval is received to remove it.
27. No drilling or non-emergency work-over operations will occur from November 15th through June 15th.

B. PRODUCING WELL & INTERIM RECLAMATION

1. Production facilities (including dikes) will be placed on cut and a minimum of 20 feet from the toe of the backcut.
2. Interim reclamation will begin within one (1) week of putting a well into production or operation.
3. Aggressive and prompt control of noxious and invasive plants will take place at all wells as well as all areas (including roads) disturbed during the construction.
4. All equipment will be thoroughly cleaned to remove all potential weed seeds before coming within 10 miles of any National Forest System lands.
5. All facilities on the oil well production site will be clustered as close as possible with just one turn around road for access. Workover rig ground anchors may be off the reclaimed area as long as they are clearly visible. The access road and areas around the facilities are to be surfaced with a minimum of four (4) inches of gravel or scoria. All other areas on the oil well location are to be reclaimed (see below). Thereafter, periodic additions of gravel or scoria will be required in order to maintain a rut-free surface for driving and equipment handling. Any soil, gravel or scoria which becomes oil-soaked must be removed, disposed of in accordance with all applicable State and Federal regulations and the area resurfaced as needed.
6. Those portions of the location that were disturbed during construction of the drilling pad but are not needed to achieve the minimum production site described above shall be re-contoured and reshaped to blend in with the surrounding topography so that existing drainage patterns are maintained. Fill slopes shall be constructed to be no steeper than 3:1. If reshaping or re-establishing a pre-construction contour would require a steep slope, the operator shall contact the Forest Service for additional mitigation measures.

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7. The disturbance corridor in which the flowline is installed does not need to be fenced to protect it from livestock. However, seed is to be broadcast over the disturbed area with a small ATV-drawn spreader or similar equipment to facilitate vegetation growth and reclamation. See PART C for the recommended seed mixture to be used.
8. Topsoil material segregated during construction will be spread evenly over those portions of the site that will not be used for production facilities or driving surfaces prior to seeding.
9. After the topsoil has been reapplied, those areas shall be seeded, mulched and fenced according to guidelines listed in PART D. Fencing is required in order to provide the interim reclamation protection from livestock and allow for the greatest chances for successfully re-establishing vegetation.
10. At least two (2) growing seasons may be needed before the vegetation and interim reclamation may be approved.
11. Pesticides may not be used to control undesirable woody and herbaceous vegetation, aquatic plants, insects, rodents, trash fish, etc., without the prior written approval of the Forest Service. A request for approval of planned uses of pesticides will be submitted four (4) months prior to the proposed starting date. Information essential for review will be provided in the form specified. Exceptions to this four (4) month prior notification may be allowed, subject to emergency request and approval, only when unexpected outbreaks of pests require control measures which were not anticipated at the time a request was submitted. Only those materials registered by the U.S. Environmental Protection Agency for the specific purpose planned will be considered for use on National Forest System lands. Label instructions will be strictly followed in the application of pesticides and disposal of excess materials and containers.
12. All production facilities (*i.e.*, pump jack, pump motor house, storage tanks, separation equipment, galvanized dikes, etc.) will be painted with a lusterless color as on the "Standard Environmental Color Sheet" Munsell soil Color Charts published by the Wyoming State Office of the Bureau of Land Management. The Forest Service recommends that the production facilities are painted the color *Carlsbad Canyon* listed on the BLM Munsell Soil Color Chart. The exception to this is if to comply with Occupational Health and Safety Act Rules and Regulations where special safety colors are required. All facilities will be painted within six (6) months of installation.
13. Load-outs will be inside the dike. A drip barrel will be installed under the end of the load-out line.
14. All pumps shall be electric, no compressors will be used in the unit.
15. After the interim reclamation has been approved, the wellhead and pump jack must be fenced according to guidelines described in *The Gold Book* to minimize injury to livestock and damage to the well facilities. A fence constructed entirely of barbed wire will not be allowed. The company has the option of fencing the entire location instead of each facility and installing a cattleguard in the access road.
16. There will be no pits left at producing oil well locations.
17. Maintain an area around all above-ground production facilities that is cleared of all vegetation for a distance of 15 feet.

C. ABANDONED WELL & FINAL RECLAMATION

1. At such a time the well is determined to be unviable, any surface facilities and improvements associated with this project shall be removed completely and all surface disturbances reclaimed to an approximate pre-construction condition. All disturbed areas that have been compacted will be

scarified. The well location shall be reshaped and re-contoured to approximate the pre-construction land form. The operator shall contact the Forest Service at that time to determine the extent of the work needed to reclaim and reshape the roads used for access.

2. Waterbars (contour ditches) are to be constructed on the contour at seventy five (75) foot intervals beginning at the top of the disturbed slope. They should be at least one (1) foot deep, with approximately two (2) feet of drop per one hundred (100) feet of length and with the berm on the downhill side.
3. All final reclamation work including reshaping the location to approximate its pre-drilling contours, constructing waterbars, seeding, etc. is to be completed within six (6) months of plugging the well. If more time is required, the operator shall contact the Forest Service to discuss this.
4. A permanent abandonment marker, permanently inscribed with operator, well number, lease number, and location (1/4 section 1/4 section, township, range, county, and state), is required. This monument must consist of a piece of pipe of not less than four (4) inches in diameter and ten (10) feet in length, of which four (4) feet shall be above ground level and the remainder being embedded in concrete. The top of the pipe must be closed by a welded or screw cap, concrete, or other approved means.
5. If the well being plugged and abandoned was a producing well, the areas where the production facilities were located and the area where the on location access road was located will be ripped to a depth of 18 inches before the location is seeded, mulched and fenced. The ripping breaks up the soil compaction in order to get better revegetation in these areas.
6. The Forest Service must approve the seed mix used for reclamation. Only certified weed-free seed may be used. The following seed mixture is recommended:

<u>Species</u>	<u>lbs./ac. P.L.S</u>
a. Western wheatgrass	7.0
b. Slender wheatgrass	5.0
c. Green needlegrass	1.0
d. Prairie clover (native)	2.0
e. Western yarrow	7.0

7. Drill seed on the contour at a depth of 1/2 inch.
8. All disturbed areas must be mulched at the rate of two tons/acre with a certified weed free mulch. Acceptable materials to use as mulch consist of hay, straw, wood chips, etc. The mulch must be crimped into the surface with a disk.
9. After drilling in the seed, it is recommended that certified weed-free straw, at a rate of two (2) tons per acre, be spread out evenly over the seeded area and crimped into the soil surface. The mulch should help to protect the seed and the crimping should "lock" the mulch into the soil to minimize losses from wind.
10. It is recommended that fall seeding take place after September 1 and prior to ground frost. To be effective, complete spring seeding after the frost has left the ground and prior to May 15.
11. All reclaimed areas shall be fenced to exclude cattle and sheep according to the standards and guidelines in *The Gold Book* as well as those described in Appendix B of the *Thunder Basin National Grassland Land & Resource Management Plan*. A copy of Appendix B is available from the Douglas District Office. The operator is responsible for maintaining the fence in good working order until the final reclamation is approved.

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12. Upon receipt of "Subsequent Report to Abandon" via the BLM, the reclamation will be inspected by the Forest Service. The final reclamation will not be approved until the site has been reclaimed so that vegetation cover is at least 70 percent of comparable off-site growth. No invasive or noxious plant species may be present and no significant erosion will be allowed. At least two (2) growing seasons may be needed before the final reclamation may be approved.

D. GENERAL STIPULATIONS

1. The operator shall submit a Sundry Notice (Form 3160-5) to the Douglas Ranger District Office for approval prior to construction of any new surface disturbing activities that are not specifically addressed in the approved APD.
2. During all road building, pad construction, drilling, well completion, producing and abandonment activities, all gasoline and diesel powered equipment used must be equipped with approved spark arresters or mufflers. The decibel level must not exceed 70 decibels at a distance of 200 feet from the exhaust of any muffler. Notify the Forest Service in the event of any fire occurrence.
3. All tanks for the storage of fluids will have spill containment protection, a dike, or other containment measure. This includes fuel tanks, barrels and buckets of fluids. They will also be within fenced areas or pump houses, areas where livestock cannot access them.
4. The operator is responsible for all spills of crude oil, automotive fuels, lubricants, liquids and Environmental Protection Agency listed hazardous materials. The operator shall give prompt notice to the US Forest Service of any spill. The operator will report to the Wyoming Department of Environmental Quality all releases that enter or threaten to enter the waters of the State and are considered a hazardous substance or an amount greater than ten (10) barrels of any combination of crude oil, petroleum condensate, and produced water or 25 gallons of refined crude oil product.
5. Design night lighting to minimize light pollution, limiting continuous or dusk-to-dawn lighting at facilities. Exceptions may be made for the lighting of towers or lines to facilitate flight safety and staffed around-the-clock operations. Whenever the facilities are not actively being worked, the lights should be at a minimum.
6. Surface use is prohibited from March 1 through July 31 within 0.50 miles (line of sight) of ferruginous and Swainson's hawk nests. This stipulation applies to all activities except emergency repairs.
7. Surface use is prohibited from February 1 through July 31 within 0.50 miles (line of sight) Golden Eagle nests. This stipulation applies to all activities except emergency repairs.
8. Surface use is prohibited from April 1 through August 15 within 0.50 miles (line of sight) of merlin nests. This stipulation applies to all activities except emergency repairs.
9. No surface occupancy or use is allowed within 0.25 miles (line-of-sight) of golden eagle, merlin, ferruginous hawk, Swainson's hawk, or burrowing owl nests.
10. Surface use is prohibited from March 1 through June 15 within 1.0 mile (line of sight) of sharptailed grouse display grounds. This stipulation applies to all activities except emergency repairs.
11. Project-related travel will be minimized to the extent feasible during wet periods when excessive road rutting (rut depths greater than 4 inches) could occur.
12. Do not deposit excess materials (silt, sand, gravel, soil, slash, debris, chemicals or other materials) below high water lines, in riparian areas, in areas immediately adjacent to riparian

areas, or in natural drainageways (draws, land surface depressions or other areas where overland flow concentrates and flows directly into streams or lakes).

13. Surface land uses are prohibited (may apply to workover operations but otherwise does not apply to day-to-day operation and other maintenance) from March 1 through June 15 within two (2) miles of an established sage grouse display ground. In the event of an emergency, however, no prior approval is needed during this time period. The operator will notify the Forest Service within 24 hours in that instance. The operator will contact the Forest Service for approval at least 48 hours in advance of any non-emergency workover operations.
14. Noise from the production facilities (well pad site) shall not exceed 49 decibels at any sage grouse display ground or a noise level of more than 10 decibels above the background noise level (39 db) at 800 feet from the noise source (well pad site).
15. No surface occupancy or use is allowed within 0.25 miles (line-of-sight) of a sharp-tailed grouse or sage grouse display ground.
16. No surface occupancy or use is allowed within 1.0 mile (line-of-sight) of a bald eagle nests.
17. To help protect Region 2 sensitive species, the operator will notify the Douglas Ranger District, if a sensitive species nest in addition to those identified in the BA/BE are located during construction or operation of the project.
18. Observations of mortality of any Threatened/Endangered/Sensitive wildlife species or establishment of new raptor nests within the project area shall be reported to the Douglas Ranger District as soon as possible.
19. The discovery of any and all paleontological resources (fossils), antiquities or other objects of historic or scientific interest, including but not limited to, historic or prehistoric ruins, fossils, or artifacts as the result of operations under this plan shall immediately be brought to the attention of the Forest Service. The operator shall cease operations at the site of discovery until authorized to proceed by the District Ranger.
20. If any cultural materials are discovered during construction, work in the area shall halt immediately, the Forest Service must be contacted, and the materials evaluated by an archaeologist or historian meeting the Secretary of the Interior's Professional Qualification Standards (48 FR 22716, Sept. 1983). The operator shall cease operations at the site of discovery until authorized to proceed by the District Ranger.
21. When constructing facilities or structures within two (2) miles of an active sage grouse display ground, design them to discourage raptor perching by maintaining a low profile or using perch inhibitors.
22. Additional mitigation measures for the benefit of sage grouse shall be completed by Ballard Petroleum Holdings, LLC and will include the following:
 - a. Off-site mitigation will occur with sagebrush mowing. Ballard will work with the Douglas Ranger District Office for the process.

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