

DECISION RECORD
Environmental Analysis (EA), WY-070-EA14-295
W. A. Moncrief JR., Reno Federal 1 Federal Plan of Development (POD)
Bureau of Land Management, Buffalo Field Office, Wyoming

DECISION: The BLM approves the applications for permit to drill (APDs) from W.A. Moncrief JR. to drill 2 horizontal oil and gas wells and construct their associated infrastructure from 2 well pads, at the locations noted below.

Compliance. This decision complies with:

- Federal Land Policy and Management Act of 1976 (FLPMA) (43 USC 1701); DOI Order 3310.
- National Environmental Policy Act of 1969 (NEPA) (42 USC 4321).
- National Historic Preservation Act of 1966 (16 USC 470).
- Endangered Species Act of 1974 (16 USC 1531).
- Powder River Basin (PRB) Oil and Gas Project Final Environmental Impact Statement (FEIS), 2003.
- Buffalo Resource Management Plan (RMP) 1985, Amendments 2001, 2003, 2011.

BLM summarizes the details of the approval of Alternative B, below. The EA includes the project description, including specific changes made at the onsite, and site-specific mitigation measures.

BLM approves the following APDs and support facilities:

#	Operator/Well Name/ Well #	Sec	Twp	Rng	Lease
1	Moncrief Reno Federal 1, 12-1TH	12	42N	74W	WYW137628
2	Moncrief Reno Federal 1, 12-1TH	12	42N	74W	WYW137628

Limitations. See the conditions of approval (COAs).

THE FINDING OF NO SIGNIFICANT IMPACT (FONSI). Analysis of Alternative B of this EA, incorporated here by reference, found the proposed APDs will have no significant effects on the human environment, beyond those described in the PRB FEIS. There is no requirement for an EIS.

COMMENT OR NEW INFORMATION SUMMARY. There is no new information received post analysis that affects this project.

DECISION RATIONALE. The approval of this project is because:

1. Mitigation measures and conditions of approval (COAs), analyzed in the EA, in environmental impact statements or environmental analysis to which the EA tiers or incorporates by reference, will reduce environmental impacts while meeting the BLM’s need.
2. The approved project conditioned by its design features and COAs, will not result in any undue or unnecessary environmental degradation.
 - a. The impact of this development cumulatively contributes to the potential for local extirpation of the Greater Sage Grouse (GSG) yet its effect is acceptable because it is outside priority habitats and is within the parameters of the PRB FEIS/ROD and current BLM and Wyoming GSG conservation strategies.
 - b. There are no conflicts anticipated or demonstrated with current uses in the area.
3. Approval of this project conforms to the terms and the conditions of the 1985 Buffalo RMP (BLM 1985) and subsequent update (BLM 2001) and amendments (BLM 2003, 2011).
4. The selected alternative will help meet the nation’s energy need, revenues, and stimulate local economies by maintaining workforces.

5. The operator, in their APDs, shall:
 - Comply with all applicable federal, state, and local laws and regulations.
 - Offer water well agreements to the owners of record for permitted water wells within 0.5 mile of a federal producing well in the APD (PRB FEIS ROD, p. 7).
6. The project is clearly lacking in wilderness characteristics as there is no federal surface.
7. The operator certified there is a surface use access agreement with the landowners or posted a Bond.
8. This approval is subject to adherence with all of the operating plans, design features, and mitigation measures contained in the Master Surface Use Plan of Operations, Drilling Plan, Water Management Plan, and information in the APDs.

ADMINISTRATIVE APPEAL: This decision is subject to administrative appeal in accord with 43 CFR 3165. Request for administrative appeal 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.

Field Manager: /s/ Duane W. Spencer

Date: 12/9/14

FINDING OF NO SIGNIFICANT IMPACT
W.A. Moncrief JR., Reno Federal 1 Federal Plan of Development (POD)
Environmental Assessment (EA), WY-070-EA14-295
Bureau of Land Management, Buffalo Field Office, Wyoming

FINDING OF NO SIGNIFICANT IMPACT (FONSI). Based on the information in the EA, WY-070-EA14-295, which BLM incorporates here by reference; I find that: (1) the implementation of Alternative B will not have significant environmental impacts beyond those addressed in the Buffalo Resource Management Plan Final Environmental Impact Statement (FEIS) 1985, and the Powder River Basin (PRB) Oil and Gas Project FEIS, 2003; (2) Alternative B conforms to the Buffalo Field Office (BFO) Resource Management Plan (RMP) (1985, 2001, 2003, 2011); and (3) Alternative B does not constitute a major federal action having a significant effect on the human environment. Thus an EIS is not required. I base this finding on consideration of the Council on Environmental Quality's (CEQ) criteria for significance (40 CFR 1508.27), with regard to the context and to the intensity of the impacts described in the EA, and Interior Department Order 3310.

CONTEXT. Mineral development is a common PRB land use, sourcing over 42% of the nation's coal. The PRB FEIS foreseeable development analyzed the development of 54,200 wells. The additional development analyzed in Alternative B is insignificant in the national, regional, and local context.

INTENSITY. The implementation of Alternative B will result in beneficial effects in the forms of energy and revenue production however; there will also be adverse effects to the environment. Design features and mitigation measures included in Alternative B will reduce adverse environmental effects. The preferred alternative does not pose a significant risk to public health and safety. The geographic area of the project does not contain unique characteristics as identified in the 1985 RMP, the 2003 PRB FEIS, or other legislative or regulatory processes. BLM used relevant scientific literature and professional expertise in preparing the EA. The scientific community is reasonably consistent with their conclusions on environmental effects relative to oil and gas development. Research findings on the nature of the environmental effects have minor controversy, are not highly uncertain, or do not involve unique or proven risks. The PRB FEIS predicted and analyzed oil development of the nature proposed with this project and similar projects. The selected alternative does not establish a precedent for future actions with significant effects. The proposal may relate to the PRB Greater Sage-Grouse and its habitat decline having cumulative significant impacts; yet this project is within the parameters of the impacts in the PRB FEIS. There are no cultural or historical resources present that will be adversely affected by the selected alternative. The project area is clearly lacking in wilderness characteristics since it lacks federal surface. No species listed under the Endangered Species Act or their designated critical habitat will be adversely affected. The selected alternative will not have any anticipated effects that would threaten a violation of federal, state, or local law or requirements imposed for the protection of the environment.

ADMINISTRATIVE REVIEW AND APPEAL. This finding is subject to administrative review according to 43 CFR 3165. Request for administrative review of this finding 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 FONSI is received or considered to have been received. Parties adversely affected by the State Director's finding may appeal that finding to the Interior Board of Land Appeals, as provided in 43 CFR 3165.4.

Field Manager: _____ /s/ Duane W. Spencer

Date: _____ 12/9/14

Environmental Assessment (EA), WY-070-EA14-295
Applications for Permit to Drill (APDs)
W.A. Moncrief JR., Reno Federal 1 Federal Plan of Development (POD)
Bureau of Land Management, Buffalo Field Office, Wyoming

1. INTRODUCTION

The operator, W.A Moncrief, Jr. requests BLM’s approval for 2 applications for permit to drill (APDs) 2 horizontal wells on separate pads. BLM incorporates the APDs here by reference; see the administrative record (AR) available for review at the Buffalo Field Office (BFO). The wells will be drilled from private surface locations into underlying federal minerals on leases listed below resulting in standard split federal jurisdiction. Pete Reno is the surface owner of the proposed well locations. The project is clearly lacking in wilderness characteristics as there is no federal surface.

Table 1.1. Proposed Wells

#	Operator/Well Name/ Well #	Sec	Twp	Rng	Lease
1	Moncrief Reno Federal 1, 12-1TH	12	42N	74W	WYW137628
2	Moncrief Reno Federal 1, 12-2TH	12	42N	74W	WYW137628

This EA will tier to the Powder River Basin Oil and Gas Project Final Environmental Impact Statement (PRB FEIS) (2003) and the following EA which has similar analysis to this proposed project.

Table 1.2. NEPA Analyses Which BLM Tiers to and Incorporates by Reference, as similar analyses in the semi-arid sagebrush, short grass prairie of NE Wyoming.

Operator/POD/Well Name & #	NEPA Analysis #	# / Type Wells	Approved Mo/Yr/Update
Yates Pet.- Baker 8H,	WY-070-EA14-224	5 Oil	5/8/2014
Lance Oil and Gas Company, Inc. Sahara Plan of Development (POD)	WY-070-EA13-72	21 Oil	3/5/13

One may review these documents at the BLM Buffalo Field Office (BFO) and on our website: http://www.blm.gov/wy/st/en/field_offices/Buffalo.html.

1.1. Background

The operator submitted the APDs for these proposed wells on January 27th, 2014. Onsites for these wells were completed on March 25, 2014. Post Onsite Deficiency letter sent April 4, 2014. The operator “Bonded On” to these 2 wells, located on Floyd C. Reno and Sons surface. The 2 Bonds for these wells were approved in November, 2014, by the BLM.

1.2. Need for the Proposed Project

The BLM’s need for this project is to meet the management objectives of the Buffalo Resource Management Plan (RMP), 1985, and amendments 2001, 2003, and 2011 (to which this EA tiers). BLM must determine how and under what conditions to balance natural resource conservation with allowing the operator to exercise lease rights to develop fluid minerals, as described in their APDs associated plans. Conditional fluid mineral development supports the RMP, the Mineral Leasing Act of 1920, the Federal Land Policy Management Act (FLPMA), and other laws and regulations.

1.3. Decision to be Made

The BLM will decide whether or not to approve the proposed development, and if so, under what terms and conditions agreeing with the Bureau's multiple use mandate, environmental protection, and RMP.

1.4. Scoping and Issues

BLM posted the proposed APDs for 30 days and will timely publish the EA, any finding, and decision on the BFO website. This project is similar in scope to other fluid mineral development the BFO analyzed. External scoping is unlikely to identify new issues, as verified with recent fluid mineral EAs that BLM externally scoped. External scoping of the horizontal drilling in Anadarko Petroleum's Crazy Cat East EA, WY-070-EA13-028, 2013, in the PRB area received 3 comments, revealing no new issues. The BFO interdisciplinary team (ID team) conducted internal scoping by reviewing the proposal, its location, and a resource (issue) list (see, AR), to identify potentially affected resources, land uses, resource issues, regulations, and site-specific circumstances not addressed in the analyses incorporated by reference. This EA will not discuss resources and land uses that are not present, unlikely to receive material affects, or that the PRB FEIS or other analyses adequately addressed. The extensive development in the area was material to this scoping; see Section 3, below.

2. PROPOSED PROJECT AND ALTERNATIVES

2.1. Alternative A – No Action

The no action alternative would deny these APDs requiring the operator to resubmit APDs that comply with statutes and the reasonable measures in the PRB RMP Record of Decision (ROD) in order to lawfully exercise conditional lease rights. The PRB FEIS considered a no action alternative, pp. 2-54 to 2-62. The BLM keeps the no action alternative current using the aggregated effects analysis approach – incorporating by reference the analyses and developments approved by the subsequent NEPA analyses for similar and/or overlapping developments to the proposal area.

2.2. Alternative B Proposed Action (Proposal)

Overview. The operator requests BLM's approval for 2 APDs and their supporting infrastructure. The proposals are to explore for, and possibly develop oil and gas reserves in the Turner Formation at depths of approximately 11,300' total vertical depth. Lateral length is 4,061' north.

The project area is 16 miles southwest of Wright, Campbell County, Wyoming. Project elevations average 5,200 feet. The topography has gently sloped draws, rising to mixed sagebrush and grassland uplands. Ephemeral tributaries of Bates Creek drain the area. The area climate is semi-arid, averaging 10-14 inches annual precipitation.

Drilling, Construction & Production design features include:

Access

- A road network will consist of existing and improved all-weather roads and newly constructed all weather roads. The access roads will be crown and ditch roads.
- All roads will be maintained to meet BLM standards during the entire life of the project area.
- During interim reclamation the ditches will be seeded with a BLM approved seed mix to minimize erosion and maintain topsoil viability.
- Culverts will be installed on newly constructed access roads.

Well Locations

- The pads will be reduced as much as possible during production/interim reclamation. See Table 2 below.
- The well pad will be constructed with cuts/fills and topsoil/spoil piles surrounding the pad surface.

- The wells will use a semi-closed loop system. Lined pits at the pads will hold the cuttings.
- Up to 7 x 400 bbl tanks for oil and water will be placed on location for each well.
- No staging areas, man camps/housing facilities are anticipated to be used off-site. Working trailers and sleeping trailers will be placed on the well pad during the drilling and completion of the well.
- If the well becomes a producer, production facilities will be located at the well site and will include a pumping unit, storage tanks, buildings, oil-water separator (heater-treater). There will be no pits at these producing well locations.
- Dikes will be constructed completely around production facilities, i.e. production tanks, water tanks, and heater treater. The dikes will be constructed, approximately 3 feet high, and hold capacity of the largest tank plus 10%. The load-out line will be outside of the dike area. A drip barrel or “Getty-Box” will be installed under the end of all load-out lines.

Drilling and Completion Operations

- Hydraulic fracturing (HF) operations are planned as a ‘plug & perf’ operation done in stages. All fresh water will be contained in either approximately 120-170 HF tanks or a large capacity storage tank (18,000-44,000 bbl) in conjunction with about 30 x 500 bbl HF tanks. No additional well pad disturbance is anticipated for HF operations. Completion flowback water will be held in tanks on location and trucked to a disposal facility permitted by Wyoming Department of Environmental Quality (WDEQ).
- Flowback equipment and tanks are spotted 2-3 days before pumping. Sand silos are spotted and filled 2-3 days prior to pumping.
- Next pump trucks and chemical mixing equipment arrive and, when ready, operations continue for 36-48 hours or 3-5 days depending on the type of stimulation stage isolation (i.e. packers/sleeves or plug/perf respectively).
- Sand is continuously brought on site in semi-truck loads during pumping. It is necessary to have a safe turning radius available for these trucks. Pumping water may require heating in the winter months.
- A detailed completion operations plan is outlined in the surface use plan (SUP).
- Peak truck traffic to fill HF tanks for completion operations is estimated to be 1800 roundtrips per well.
- It will take approximately 60 days to drill and complete each well.

Table 2. Proposed Surface Disturbance.

Activity	Length (feet)/ (miles)	Width (feet)/ (miles)	Acres of Disturbance	Interim Disturbance
2 Constructed pads with cuts/fills and topsoil/spoil disturbances.	varies	varies	14.15	4.59 ac.
Newly Constructed Access Roads	0.2 miles	40'	0.98	0.98 ac.
Total Disturbance for this location			15.13	5.6 ac.

Plan of Operations.

The proposal conforms to all Bureau standards and incorporates appropriate best management practices, required and designed mitigation measures determined to reduce the effects on the environment. BLM reviewed and approved a surface use plan of operations describing all proposed surface-disturbing activities pursuant to Section 17 of the Mineral Leasing Act, as amended. This analysis also incorporates and analyzes the implementation of committed mitigation measures in the SUP, drilling plan, and the standard conditions of approval (COAs) found in the PRB FEIS ROD, Appendix A.

Reasonably Foreseeable Activity.

The reasonably foreseeable activity (RFA) for this and adjacent areas includes oil/gas exploration on 640 acre spacing and possibly 320 acre spacing for horizontal wells and 40 to 80 acre spacing for vertical wells. (This does not preclude the RFA spacing analysis in the PRB FEIS or applying to drill multiple wells from this pad further reducing the surface disturbance per well.) The RFA in the project analysis area is well within the RFA of the PRB FEIS total of 54,200 fluid mineral wells. Potential APD submittals or reasonably foreseeable activity included in this analysis could consist of more, multiple wells on existing or proposed pads and would, as much as possible, tie into existing supporting infrastructure; tank batteries, pipelines, power lines, and transportation networks.

2.3. Conformance to the Land Use Plan and Other Environmental Assessments

This proposal does not diverge from the goals and objectives in the Buffalo Resource Management Plan (RMP), 1985, and generally conforms to the terms and conditions of that land use plan, and its amendments, , 1985, 2003, 2011, and laws including the Clean Air Act, 42 USC 7401-7671q (2006), the Clean Water Act, 33 USC 1251 et seq. (1972), etc.

3. AFFECTED ENVIRONMENT

This section briefly describes the physical and regulatory environment that may be affected by the alternatives in Section 2, or where changes in circumstances or regulations occurred since the approval of analyses to which this EA incorporates by reference. The PRB FEIS considered a no action alternative (pp. 2-54 to 2-62) in evaluating a development of up to 54,200 fluid mineral wells. Nearly all of the PRB's coalbed natural gas (CBNG) wells and over 60% of the deep oil and gas wells are hydraulically fractured; BLM and Goolsby 2012. The BLM uses the aggregated effects analysis approach - incorporating by reference the circumstances and developments approved via the subsequent NEPA analyses for similar, overlapping and intermingled developments coincident to this proposal area to retain currency in the no action alternative. 615 F. 3d 1122 (9th Cir. 2010). The number of conventional wells in the Buffalo planning area is 1313, which includes 783 horizontal wells (federal, fee, and state) (as of April 2013). This represents 41% of the projected 3,200 in the 2003 PRB ROD. This agrees with the PRB FEIS which analyzed the reasonably foreseeable development rolling across the PRB of 51,000 CBNG and 3,200 natural gas and oil wells. BLM determined a minimum of 115 townships from the northern borders of Sheridan and Campbell Counties to the southern border of Campbell County are a developed field for fluid minerals because of the existing federal developments. These APD proposals are in the developed field. In addition, other operators are likely to continue seeking permits to develop additional leases in or in the affects analysis areas near the project area; decisions to approve or deny future proposals will occur following APD submittal. Development occurring on non-federal surface and non-federal mineral estate would continue.

3.1. Air Quality

Refer to the PRB FEIS pp. 3-291 to 3-299, for a 2003-era description of the air quality conditions. BLM incorporates by reference, Update of Task 3A Report for the Powder River Basin Coal Review Cumulative Air Quality Effects for 2020, BLM (AECOM), 2009, (Cumulative Air Quality Effects, 2009) as it captures the cumulative air quality effects of present and projected PRB fluid and solid mineral development. PRB coal review documents are available at

http://www.blm.gov/wy/st/en/programs/energy/Coal_Resources/PRB_Coal/prbdocs.html.

The Environmental Protection Agency (EPA) established ozone standards in 2011. Existing air quality in the PRB is "unclassified/attainment" with all ambient air quality standards. It is also in an area that is in prevention of significant deterioration zone. PRB air quality is a rising concern due to ozone in the oil and gas producing Upper Green River Basin that became one of the nation's 40 "nonattainment" zones for ozone in 2012; in addition to PRB-area air quality alerts issued in 2011-2014 for particulate matter (PM),

attributed to coal dust. Four sites monitor the air quality in the PRB: Cloud Peak in the Bighorn Mountains, Thunder Basin northeast of Gillette, Campbell County south of Gillette, and Gillette. In addition, the Wyoming Air Resource Monitoring System (WARMS) measures meteorological parameters from 9 sites throughout the State, and particulate concentrations from 5 of those sites, monitors speciated aerosol (3 locations), and evapotranspiration rates (1 location). The sites monitoring air quality for the Powder River Basin are located at Sheridan, South Coal Reservoir, Buffalo, Fortification Creek, and Newcastle. The northeast Wyoming visibility study is ongoing by the Wyoming Department of Environmental Quality (WDEQ). Sites adjacent to the Wyoming PRB-area are at Birney on the Tongue River 24 miles north of the Wyoming-Montana border, Broadus on the Powder River in Montana, and Devils Tower. Adgate, et al. (2014) advanced a hypothesis that air and water quality effects from HF may negatively impact human health but concluded that there were “major uncertainties” and a “paucity of baseline data” after drilling 153,260 wells since 2004. They called for more research funding.

Existing air pollutant emission sources in the region include:

- Exhaust emissions (primarily CO and nitrogen oxides (NO_x)) from existing natural gas fired compressor engines used in production of natural gas and CBNG; and, gasoline and diesel vehicle tailpipe emissions of combustion pollutants;
- Particulate matter (PM), dust, generated by vehicle travel on unpaved roads, windblown dust from neighboring areas, road sanding during the winter months, coal mines, and trains;
- Transport of air pollutants from emission sources located outside the region;
- NO_x, PM, and other emissions from diesel trains and,
- SO₂ and NO_x from power plants.

3.2. Soils, Ecological Sites, and Vegetation

BLM incorporates by reference the soils, vegetation and ecological sites, in sections 3, pages 8, 9 and 10 of Yates Petroleum’s Baker 8H, EA (approved 5/8/14) in Table 1.2, as well as the Vegetation and Soils sections in Chapter 3, pages 78 to 89 and 92 to 106, of the PRB FEIS. Soils, ecological sites, and vegetation found in the areas of these PODs are similar, with similar effects and mitigation methods. Affected soils and ecological sites in the proposed POD include Loamy and Sandy ecological sites, which include loam, sand and clay soils.

3.3. Water Resources

The Wyoming State Engineer’s Office (WSEO) has authority for regulating water rights issues and permitting impoundments for the containment of the State’s surface waters. The WOGCC has authority for permitting and bonding off channel pits located over state and fee minerals.

3.3.1. Groundwater

The historical use for groundwater in this area was for stock water. A search of the WSEO Ground Water Rights Database showed registered water wells within 1 mile of the proposed well. Refer to the PRB FEIS for additional information on groundwater, pp. 3-1 to 3-36.

3.3.2. Surface Water

The project area is in the All Night Creek drainage which is tributary to the Belle Fourche River. Most of the area drainages are ephemeral (flowing only in response to a precipitation event or snow melt) to intermittent (flowing only at certain times of the year when it receives water from alluvial groundwater, springs, or other surface source – PRB FEIS, Chapter 9, Glossary). The channels are primarily well vegetated grassy swales, without defined bed and bank. See the PRB FEIS for a surface water quality discussion, pp. 3-48 to 3-49. A search of the WSEO Ground Water Rights Database, and an on-the-ground investigation showed no springs within 1 mile of the project area. For more information on surface water refer to the PRB FEIS, pp. 3-36 to 3-56.

3.4 Minerals – Leasable, Locatable, and Salable

Numerous zones of “shows” or even potentially exploitable oil/gas exist within the project area, but at various depths and in varying quantities and qualities. Moncrief is proposing to test and develop the Turner Formation in the project area. Coal occurs in the project area; however, it occurs at some depth in the subsurface. The closest coal mine is the Antelope Mine, approximately 25 miles to the southeast. There are no known occurrences of other leasable minerals in the project area. There are a total of 36 individual mining claims (for locatable minerals) located in the project area. Although mining claimants are not required to list the mineral(s) they are locating their claims for, given the number of uranium projects in this area, these mining claims are likely for uranium. The two wells in this project occur in/near a known uranium development project: AUC, LLC’s Reno Creek In-Situ Uranium Recovery Project. The strata being exploited for uranium are very shallow, up to 500’ deep. There are no BLM-authorized salable minerals projects in/near the project area.

3.5. Wetlands/Riparian

The National Wetland Inventory (NWI) identifies no wetlands near the project area.

3.6. Invasive or Noxious Weeds

Weeds noted in the project area include, spotted knapweed, Scotch thistle, Canada thistle, field bindweed, cheatgrass and Russian thistle. The operator has developed an Integrated Pest Management Plan, which addresses weed control.

3.7. Wildlife

The PRB FEIS identified wildlife species occurring in the PRB, pp. 3-113 to 3-206. BLM performed a habitat assessment in the project area on March 25, 2014. The biologist evaluated impacts to wildlife resources and recommended project modifications where wildlife issues arose. BLM wildlife biologists also consulted databases compiled and managed by BLM BFO wildlife staff, the PRB FEIS, WY Game and Fish Department (WGFD) datasets, and the Wyoming Natural Diversity Database (WYNDD) to evaluate the affected environment for wildlife species that may occur in the area. Site specific information is described below for species known or suspected to occur and become impacted beyond the analysis of the PRD EIS 2003. Rationale for species not discussed in detail below can be referenced in the administrative record (Table W.1.(Summary of Sensitive Species Habitat and Project Effects)) and Table W.2. (Summary of Threatened and Endangered Species Habitat and Project Effects).

Land uses and other disturbances occurring within the proposed project area include; livestock grazing, ranching, overhead power lines, Highway 387, and Turnercrest Road (< 500 ft from proposal), as well as conventional oil and gas. Habitats within the proposal are comprised of sagebrush grassland and mixed-grass prairie. The dominant vegetation is Wyoming big sagebrush and the understory is a mix of pasture grasses (needleandthread, prairie junegrass, Blue gramma, Sandberg Bluegrass, Threadleaf sedge, and cheatgrass). The habitat is similar in nature to the habitats (sagebrush obligate migratory birds and greater sage-grouse habitat) discussed in the Sahara POD EA, WY-070-EA13-72, incorporated here by reference.

3.7.1. Threatened, Endangered, Candidate, Sensitive Species

3.7.1.1. Greater Sage-Grouse (GSG)

GSG nesting habitat exists within the proposal area. The majority of the sagebrush stands have been fragmented by oil and gas development. No leks are within two miles of the proposal. The affected environment for this proposal is similar to a recent approved project (Sahara POD) BLM analyzed. Therefore, Lance’s Sahara POD EA, WY-070-EA13-72 approved 3/5/13) analysis is incorporated here by reference: Affected Environment (Section 3.7.4.1, p.18-19). The BLM IM WY-2012-019 establishes interim management policies for proposed activities on BLM-administered lands, including federal mineral estate, until RMP updates are complete.

3.7.1.2. Migratory Birds

The PRB FEIS discussed the affected environment for migratory birds, pp. 3-150 to 3-153. A wide variety of migratory birds may occur in the proposal area at some point during the year. Migratory birds are birds that migrate for breeding and foraging at some point in the year. The BLM-Fish and Wildlife Service (FWS) Memorandum of Understanding (MOU) (2010) promotes the conservation of migratory birds, complying with Executive Order 13186 (Federal Register V. 66, No. 11). BLM must include migratory birds in every NEPA analysis of actions that have potential to affect migratory bird species of concern to fulfill obligations under the Migratory Bird Treaty Act (MBTA). The MBTA (and Bald and Golden Eagle Protection Act (BGEPA)) are strict liability statutes so require no intent to harm migratory birds through prosecuting a taking. Recent prosecutions or settlements in Wyoming, and the west, cost companies millions of dollars in fines and restitution (which was usually retrofitting power lines to discourage perching to minimize electrocution or shielding ponds holding toxic substances). BLM encourages voluntary design features and conservation measures supporting migratory bird conservation, in addition to appropriate restrictions.

Habitats occurring near the proposed well location include sagebrush steppe grasslands, mixed grass prairie, and mature deciduous trees. Many species that are of high management concern use these areas for their primary breeding habitats (Saab and Rich 1997). Nationally, grassland and shrubland birds declined more consistently than any other ecological association of birds over the last 30 years (WGFD 2009). The FWS's Birds of Conservation Concern (BCC 2008) report identifies species of all migratory nongame birds that, without additional conservation actions, are likely to become candidates for listing under the Endangered Species Act. Species in this list that have the potential to occur in the project area are: Brewer's sparrow, sage thrasher, loggerhead shrike, short-eared owl, and grasshopper sparrow. Of these, Brewer's sparrow, sage thrasher, sage sparrow, Baird's sparrow, and loggerhead shrike are BLM WY Sensitive Species (PRB FEIS WY-070-02-065, pp 3-189).

3.7.1.3. Raptors (Ferruginous hawk)

The PRB FEIS discussed the affected environment for the Ferruginous Hawk, p. 3-183. This species is widely distributed; however, its population status and trends are unknown but are suspected to be stable. Populations are experiencing habitat loss, and they are sensitive to human disturbance. This species typically nests on the ground in grass and sage-shrub lands, increasing its exposure to ground predators. The proposal area includes suitable nesting and foraging habitats. One ferruginous hawk nest (BLM #2579) is within 0.5 miles of the proposed well location (Moncrief Reno Federal 1, 12-2TH). The nest was surveyed from 2004-2011 and had not been active during those years during breeding season. The proposal is located outside the biological buffer (a biologic buffer is a combination of distance and visual screening that provides nesting raptors with security such that they will not be flushed by routine activities). The surrounding area is currently being developed for conventional oil by several operators on both fee and federal leases. To reduce the risk of decreased productivity or nest failure, the BLM BFO would require a 0.5 mile radius timing limitation for surface disturbing activities during the breeding season (February 1-July 31) around active/biologically important raptor nests.

3.8. Cultural.

In accordance with Section 106 of the National Historic Preservation Act (NHPA), BLM must consider impacts to historic properties (sites that are eligible for or listed on the National Register of Historic Places (NRHP)). For an overview of cultural resources found in Buffalo planning area refer to the Draft Cultural Class I Regional Overview, Buffalo Field Office (BLM, 2010). A previously reviewed and accepted Class III cultural resource inventory (BFO # 70040119) adequately covered the proposal area. No cultural resources have been found in or near the proposal.

Site Number	Site Type	Eligibility
48CA5004	Historic and Prehistoric Site	Not Eligible

4. ENVIRONMENTAL EFFECTS

No Action Alternative. BLM analyzed the no action alternative as Alternative 3 in the PRB FEIS and it subsequently received augmentation of the effects analysis in this EA through the analysis of mineral projects, their approval, and construction; and through the analysis and approval of other projects. BLM incorporates by reference these analyses in this EA. This updated the no action alternative and cumulative effects. The project area has surface disturbance from existing roads, well pads, and oil and gas facilities. Under the no action alternative, on-going well field operations would continue as would the development of approved single and multi-well pads, consisting of horizontal wells with approved APDs and other approved APDs. The production and the drilling and completion of these new wells would result in noise and human presence that could affect resources in the project area; these effects could include the disruption of wildlife, the dispersal of noxious and invasive weed species, and dust effects from traffic on unpaved roads. Present fluid mineral development in the PRB is under half of that envisioned and analyzed in the PRB FEIS. There is only a remote potential for significant effects above those identified in the PRB FEIS to resource issues as a result of implementing the no action alternative.

Alternative B, Proposed Action (Proposal)

4.1. Air Quality

In the project area, air quality impacts would occur during construction (due to surface disturbance by earth-moving equipment, vehicle traffic fugitive dust, well testing, as well as drilling rig and vehicle engine exhaust) and production (including well production equipment, booster and pipeline compression engine exhaust). The amount of air pollutant emissions during construction would be controlled by watering disturbed soils, and by air pollutant emission limitations imposed by applicable air quality regulatory agencies. BLM incorporates by reference the air quality direct, indirect, cumulative, and residual effects from the analyses in Table 3.1, above as they are materially similar to those for these proposals. BLM incorporates by reference the analysis found in the August 2012 Lease Sale EA, WY-070-EA12-44, pp. 45-51 (air quality, greenhouse gas emissions, and visibility). Air quality impacts modeled in the PRB FEIS and Cumulative Air Quality Effects, 2009 concluded that PRB projected fluid and solid development would not violate state, or federal air quality standards and this project is within the development parameters.

4.2. Soils, Ecological Sites, and Vegetation

Impacts anticipated occurring and mitigation considered with this proposal will be similar to those analyzed in Section 4, Affected Environment, pages 14, 15 & 16 of the Yates Petroleum Baker 8H EA approved 5/8/14) in Table 1.2, as well as the Vegetation and Soils sections in Chapter 4 pages 134 to 149, 153 to 164 and page 172 of the PRB FEIS. These incorporated EA and FEIS sections analyze the historical values and settings for soils, ecological sites, and vegetation. Although soil types in this proposed POD are not identical to the soils in the tiered PODs, the effects and mitigation are similar.

4.3. Water Resources

Adherence to the drilling COAs, the setting of casing at appropriate depths, following safe remedial procedures in the event of casing failure, and using proper cementing procedures should protect fresh water aquifers above the drilling target zone. Compliance with the drilling and completion plans and Onshore Oil and Gas Orders Nos. 2 and 7 minimize an adverse impact on ground water. The volume of water produced by this federal mineral development is unknowable at the time of permitting.

4.4 Minerals – Leasable, Locatable, and Salable

No effects to the project are expected to occur from either the other oil/gas projects, or the Reno Creek uranium project, on the proposed project. The other oil projects in the area exploit deeper formations than that anticipated to be developed here (Turner Formation). The gas projects in the area exploit coalbed

natural gas (CBNG), a much shallower resource. The uranium anticipated to be mined in/near the project area is very shallow. No effects are expected from this proposed project on those projects, and vice versa.

4.5. Wetland/Riparian

No wetlands or riparian areas were shown in the National Wetlands Inventory in the project area.

4.6. Invasive Species

BLM anticipates the proposal's direct, indirect, residual, and cumulative effects to invasive species (weeds) establishment, will be similar to those found in the Yates Petroleum, Baker 8H EA, Section 4 pages 18 & 19, in Table 1.2, as well as the PRB FEIS Chapter 4, pages 158 to 172, addressing weeds, incorporated here by reference. BLM and the operators committed mitigation measures adequately mitigate these effects.

4.7. Wildlife

4.7.1. Wildlife Threatened, Endangered, Proposed and Candidate Species

4.7.1.1. Greater Sage-Grouse (GSG)

Effects (Direct and indirect, Cumulative, Mitigation, and Residual) to GSG from surface disturbing and disruptive activities associated with development of horizontal oil wells were analyzed in Lance's Sahara POD EA, WY-070-EA13-72 (approved 3/5/13), Section 4.6.4.1, pp. 34-37, incorporated here by reference. Activities associated with development of this project are anticipated to be similar in nature, with the following additional site-specific information.

The proposal area contains suitable nesting habitat. Construction of the wells and their associated infrastructure will cause fragmentation of sagebrush stands and result in the direct loss of approximately 15 acres (see Table 2.2a. Disturbance Summary) of GSG habitat. Noise and human disturbance associated with roads, construction, drilling, and completion will be disruptive to GSG. Implementation of the project will adversely impact nesting habitat, both through direct loss of suitable habitats and avoidance of the area by GSG due to fragmentation and anthropogenic activity.

4.7.1.2. Migratory Birds

The PRB FEIS discussed direct and indirect effects to migratory birds on pp. 4-231 to 4-235. BLM analyzed the effects to migratory birds from surface disturbing and disruptive activities associated with development of horizontal oil wells in the Lance's Sahara POD EA, WY-070-EA13-72 (approved 3/5/13), Section 4.6.2.2, pp. 31-33, incorporated here by reference. Effects and mitigation associated with this project are similar in nature, with the following additional site-specific information. During the onsite, the BLM biologist identified suitable nesting habitat present for several BLM sensitive sagebrush obligates. Construction of all of the well pads within the proposal and associated infrastructure will remove habitat and could kill BLM sensitive migratory birds, or destroy eggs, if the habitat is removed during the nesting season.

Heater treaters, and similar facilities with vertical open-topped stacks or pipes, can attract birds. Facilities without exclusionary devices pose a mortality risk. Once birds crawl into the stack, escape is difficult and the bird may become trapped (U.S. v. Apollo Energies Inc., 611 F.3d 679 (10th Cir. 2010); see also Colorado Oil and Gas Commission, Migratory Bird Policy, accessed February 13, 2012). To minimize these effects, the operator will equip all open-top pits, tanks, and pipes containing hydrocarbons with nets, screens, or other avian exclusion devices to prevent injury or death to migratory birds.

4.7.1.3. Raptors (Ferruginous hawk)

4.7.1.3.1. Direct and Indirect Effects

The PRB FEIS discussed impacts to ferruginous hawks, p. 4-262. Implementing Alternative B would have the potential to cause similar direct and indirect effects on the ferruginous hawk nests near the

proposed access road. All raptors using nests in the vicinity of the project will likely be impacted to some extent by the human disturbance associated with operation and maintenance. Human activities in close proximity to active raptor nests may interfere with nest productivity. Romin and Muck (1999) indicate that activities within 0.5 miles of a nest are prone to cause adverse impacts to nesting raptors. If disruptive activities occur during nesting, they could be sufficient to cause adult birds to remain away from eggs or chicks causing overheating or chilling. This can result in egg or chick death. Prolonged disturbance can also lead to the abandonment of the nest by the adults. Routine human activities near these nests can also draw increased predator activity resulting in increased nest predation. Out-of-vehicle activities are generally considered more disturbing to raptors than in-vehicle activities (French 1972, Garber 1972, Kahl, 1972, Shagen 1980, Fraser et al. 1985, Holmes et al. 1993). Stopped vehicles, particularly when occupants leave the vehicle, provoke negative responses from nesting or perching raptors more often than moving vehicles (Steenhof 1976, Beck 1980, Scott 1985, White and Thurow 1985). The magnitude and duration of potential effects would be ameliorated with application of the 0.5-mile timing limitation stipulation during the breeding season (February 1 – July 31).

4.7.1.3.2. Cumulative Effects

The cumulative effects associated with Alternative B are within the analysis parameters and impacts described in the PRB FEIS, Volume 2, Chapter 4, p. 4-221. Existing and reasonably foreseeable conventional oil development in the PBR would affect the ferruginous hawk population due to increased human activity and fragmentation of foraging habitat.

4.7.1.3.3. Mitigation Measures

To reduce the risk of decreased productivity or nest failure, the BLM BFO would apply a 0.5-mile radius timing limitation during the breeding season (February 1 – July 31) around active raptor nests for surface disturbing activities associated with construction of the proposed well pad and access road.

4.7.1.3.4. Residual Impacts

Even with timing restrictions, ferruginous hawks may abandon nests due to foraging habitat alteration associated with development or sensitivity to well or infrastructure placement. A decline in the breeding population of ferruginous hawks within the area may occur.

4.8. Cultural Resources

BLM policy states that a decision maker's first choice should be avoidance of historic properties (BLM Manual 8140.06(C)). If historic properties cannot be avoided, mitigation measures must be applied to resolve the adverse effect. No historic properties will receive direct, indirect, cumulative, or residual effects from the proposal. Following the State Protocol Between the Wyoming Bureau of Land Management State Director and The Wyoming State Historic Preservation Officer, Section VI(A)(1), the BLM notified the Wyoming State Historic Preservation Officer (SHPO) on May 23, 2014 that no historic properties exist in the area of potential effect (APE). If any cultural values (sites, features or artifacts) are observed during operation, they will be left intact and the Buffalo Field Manager notified. If human remains are noted, the procedures described in Appendix L of the PRB FEIS and ROD must be followed. Further discovery procedures are explained in Standard COA (General)(A)(1).

4.8.1. Cumulative Effects

Construction and development of oil and gas resources impacts cultural resources through ground disturbance, unauthorized collection, and visual intrusion of the setting of historic properties. Destruction of any archeological resource results in fewer opportunities to study of past human life-ways, to study changes in human behavior through time, or to interpret the past to the public. Additionally, these impacts may compromise the aspects of integrity that make a historic property eligible for the National Register of Historic Places. Recording and archiving basic information about archaeological sites and the potential for subsurface cultural materials in the proposed project area may serve to partially mitigate

potential cumulative effects to cultural resources. Fee actions constructed in support of federal actions can result in impacts to historic properties. Oil and gas development on split estate often includes construction of infrastructure that does not require permitting by BLM. Project applicants may integrate infrastructure associated with wells draining fee minerals with wells that require federal approval. BLM has no authority over fee actions, which can impact historic properties. BLM has the authority to modify or deny approval of federal undertakings on private surface, but that authority is limited to the extent of the federal approval. Historic properties on private surface belong to the surface owner and they are not obligated to preserve or protect them. The BLM may go to great lengths to protect a site on private surface from a federal undertaking, but the same site can be legally impacted by the landowner at any time. Archeological inventories reveal the location of sensitive sites and although the BLM is obligated to protect site location data, information can potentially get into the wrong hands resulting in unauthorized artifact collection or vandalism. BLM authorizations that result in new access can inadvertently lead to impacts to sites from increased visitation by the public.

4.8.2. Mitigation Measures

If any cultural values (sites, features or artifacts) are observed during operation, they will be left intact and the Buffalo Field Manager notified. If human remains are noted, the procedures described in Appendix L of the PRB FEIS must be followed. Further discovery procedures are explained in Standard COA (General)(A)(1).

4.8.3. Residual Effects

During the construction phase, there will be numerous crews working across the project area using heavy construction equipment without the presence of archaeological monitors. Due to the extent of work and the surface disturbance caused by large vehicles, it is possible that unidentified cultural resources can be damaged by construction activities. The increased human presence associated with the construction phase can also lead to unauthorized collection of artifacts or vandalism of historic properties.

5. List of Preparers: Persons and Agencies Consulted (BFO unless otherwise noted)

Position/Organization	Name	Position/Organization	Name
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NEPA Coordinator	Tom Bills	Wyoming State Historic Preservation Officer	Mary Hopkins
Hydrologist	Brent Sobotka		

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