DECISION RECORD
True Oil, LLC,
True Fed 24-24H & True Fed 11-25H, Application for Permit to Drill (APD)
Environmental Assessment (EA), WY-070-EA14-16
Bureau of Land Management, Buffalo Field Office, Wyoming

DECISION. The BLM approves True Oil, LLC, True Fed 24-24H & True Fed 11-25H oil well applications for permit to drill (APDs) as described in Alternative B of the environmental assessment (EA), WY-070-EA14-16. This approval includes the wells' support facilities.

Compliance. This decision complies with:

- Federal Land Policy and Management Act of 1976 (FLPMA) (43 USC 1701); DOI Order 3310.
- Mineral Leasing Act of 1920 (MLA) (30 U.S.C. 181); to include Onshore Order No. 1.
- National Environmental Policy Act of 1969 (NEPA) (42 USC 4321).
- National Historic Preservation Act of 1966 (NHPA) (16 USC 470).
- 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 onsites, and site-specific mitigation measures.

Well Site. BLM approves the following APDs and support facilities:

	Well Name	Well #	Qtr/Qtr	Section	TWP	RNG	Lease #
1	True Fed 24-24H	24-24H	SESW	24	43N	76W	WYW153076
2	True Fed 11-25H	11-25H	NWNW	25	43N	76W	WYW153076

Limitations. There are no denials or deferrals. Also see the conditions of approval (COAs).

THE FINDING OF NO SIGNIFICANT IMPACT (FONSI). Analysis of Alternative B of the EA, WY-070-EA14-16 and the FONSI (both incorporated here by reference) found the proposal for the True Fed 24-24H (24-24H) & True Fed 11-25H (11-25H) will have no significant impacts on the human environment, beyond those described in the PRB FEIS. There is no requirement for an EIS.

This Project Tiers to these NEPA Documents, in Addition to the PRB FEIS.

POD Name	NEPA Document	Well Type & #	Approval
North Tree Phase I	WY-070-EA13-77	Oil / 18	3/26/2013
Dry Willow 5	WY-070-EA10-186	CBNG / 27	8/12/2010

BLM Incorporates by Reference Here These Sections from Environmental Assessments

True Fed 24-24H & True Fed 11-25H WY-070-EA14-16	North Tree Phase I WY-070-EA13-77	Dry Willow 5 WY-070-EA10-186	PRB FEIS WY-070-02-065
Soils & Vegetation: 3.2 & 4.2	Section 3.2 & 4.1.2	Section 3.2 & 4.1.1	PRB FEIS: 3-78-107, 4-134-152, 4-153-164, 4-393-394, 4-406
Groundwater 3.8.1 & 4.1.1	Section 3.3.1 & 4.1.3.1	Section 3.5.1 & 4.1.5.1	PRB FEIS: 3-1-30, 4-1-69, 4-392, 4-405
Surface Water 3.8.2 & 4.1.2	Section 3.3.2 & 4.1.4.1	Section 3.5.2 & 4.1.5.2	PRB FEIS: 4-85-86, 4-117-124, 3-36-56. 4-69-122, 4-393, 4-405
Invasive Species: 3.11 & 4.7	Section 3.5 & 4.1.6	Section 3.2.3 & 4.1.2	PRB FEIS: 3-103-108, 4-153-172

COMMENT OR NEW INFORMATION SUMMARY. BLM publically posted the proposed APDs for 30 days, received no comments, and then internally scoped them. BLM experience in the PRB (outside of the Fortification Creek Planning Area) revealed little public input or new issue discovery other than those revealed after public scoping during development of the PRB FEIS. Since development of True's 24-24H & 11-25H proposal, BFO received an updated policy on reducing direct wildlife mortality, BLM IM-2013-033; and a WY BLM policy on migratory bird conservation measures, WY IM-2013-005.

DECISION RATIONALE. BLM bases the decision authorizing the selected project on:

1. BLM and True included mitigation measures to reduce environmental impacts while meeting the BLM's need. For a complete description of all site-specific COAs see the COAs. The PRB FEIS analyzed and predicted that the PRB oil and gas development would have significant impacts to the region's Greater Sage-Grouse (GSG) population. The impact of this development cumulatively contributes to the potential for local GSG extirpation yet its effect is acceptable because it is outside priority habitats and is within the parameters of the PRB FEIS and ROD and current BLM and Wyoming GSG conservation strategies.
2. True will conduct operations to minimize adverse effects to surface and subsurface resources, prevent unnecessary surface disturbance, and conform to currently available technology and practice.
3. The selected alternative will help meet the nation's energy needs, and help stimulate local economies by maintaining workforce stability.
4. The Operator committed to:
   - Comply with the approved APD, applicable laws, regulations, orders, and notices to lessees.
   - Obtain necessary permits from agencies.
   - Offer water well agreements to the owners of record for permitted wells.
   - Incorporate several measures to alleviate resource impacts into their submitted surface use plan and drilling plan.
5. The Operator certified it has a surface access agreement or posted a 43 CFR 3814.1 bond.
6. The project is clearly lacking in wilderness characteristics as there is no federal surface acreage.
7. These APDs are pursuant to the Mineral Leasing Act for the purpose of exploring or developing oil or gas and do not satisfy the categorical exclusion directive of the Energy Policy Act of 2005, Section 390 because individual surface disturbances are greater than 5 acres.

ADMINISTRATIVE REVIEW AND APPEAL. This decision is subject to administrative review according to 43 CFR 3165. Request for administrative review of this decision must include information required under 43 CFR 3165.3(b) (State Director Review), including all supporting documentation. Such a request must be filed in writing with the State Director, Bureau of Land Management, P.O. Box 1828, Cheyenne, Wyoming 82003, no later than 20 business days after this Decision Record is received or considered to have been received. Parties 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: _____ Date: 11/21/13

FINDING OF NO SIGNIFICANT IMPACT
True Oil, LLC,
True Fed 24-24H & True Fed 11-25H, Application for Permit to Drill (APD)
Environmental Assessment (EA), WY-070-EA14-16
Bureau of Land Management, Buffalo Field Office, Wyoming

FINDING OF NO SIGNIFICANT IMPACT (FONSI). Based on the information in the EA, WY-070-EA14-16, 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 Final Environmental Impact Statement (FEIS) 1985, the Powder River Basin (PRB) FEIS, 2003, the North Tree Phase I, WY-070-EA13-77 and the Dry Willow 5, WY-070-EA10-186 POD(s), to which this EA tiers; (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 minimize adverse environmental effects. The preferred alternative does not pose a significant risk to public health and safety. The geographic area of project does not contain unique characteristics identified in the 1985 RMP, 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 are not highly controversial, highly uncertain, or involve unique or unknown 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 the small size of 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 there is no federal surface acreage. 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: _____ Date: 11/21/13

ENVIRONMENTAL ASSESSMENT (EA)
True Oil, LLC
True Fed 24-24H & True Fed 11-25H, Application for Permit to Drill (APD),
WY-070-EA14-16
Bureau of Land Management, Buffalo Field Office, Wyoming

1. INTRODUCTION

BLM provides an EA for True Oil, LLC (True), True Fed 24-24H (24-24H) and True Fed 11-25H (11-25H) oil well applications for permit to drill (APDs). This site-specific analysis tiers into and incorporates by reference the information and analysis in the Final Environmental Impact Statement and Proposed Plan Amendment for the Powder River Basin Oil and Gas Project (PRB FEIS), WY-070-02-065, 2003, the North Tree Phase I, WY-070-EA13-77 and Dry Willow 5, WY-070-EA10-186 PODs, and the PRB FEIS Record of Decision (ROD), pursuant to 40 CFR 1508.28 and 1502.21. 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. These APDs are pursuant to the Mineral Leasing Act for the purpose of exploring or developing oil or gas and do not satisfy the categorical exclusion directive of the Energy Policy Act of 2005, Section 390 because individual surface disturbances are greater than 5 acres.

Congress made a 4-part process for federal fluid mineral decisions under the long-term needs of multiple-use. First is the land use / resource management plan (RMP); here the PRB FEIS and ROD amendment to the BFO RMP. Second are the decisions of whether and, if so, under what conditions, to lease lands for fluid mineral development. Courts held leasing decisions are an almost irrevocable resource commitment. Third, (this phase) is deciding on the proposed APDs: the site-specific analysis, and mitigation. Fourth is the monitoring and reclamation of wells and their features. (Pendery 2010)

1.1. Background

Prior to submitting these APDs, True sent in notices of staking (NOSs) applications and initial onsites had been conducted on March 27, 2012. More than 60 days passed and at the request of True, notified in an email correspondence sent May, 2012 to the BLM, the NOSs were returned to the Operator. True submitted the 24-24H and 11-25H application for permit to drill (APDs) by July 9, 2012. Additional correspondence in the form of email and telephone conversations between True and BLM took place throughout the remainder of 2012. New onsites were conducted on November 5 and 8, 2012 due to changes with the access plan and ongoing communication between True and the affected surface land owners, concerning surface use and access agreements. The BLM sent True a post onsite deficiency letter on February 26, 2013 and responses to all deficiencies were submitted on September 24, 2013.

1.2. Need for the Proposed Project

BLM's need for this project is to determine whether, how, and under what conditions to support the Buffalo Resource Management Plan's (RMP) goals, objectives, and management actions (2003 Amendment) with allowing the exercise of the operator's conditional lease rights to develop fluid minerals on federal leases. APD information is an integral part of this EA, which BLM incorporates here by reference. Conditional fluid mineral development supports the RMP and 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

The BLM posted the APDs for 30-days and received no public comments. Previously BFO conducted extensive external scoping for the PRB FEIS - discussed on p. 2-1 of the PRB FEIS and on p. 15 of the PRB ROD. 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 BLM recently externally scoped. External scoping of the horizontal drilling in Crazy Cat EA, WY-070-EA13-028, 2013, in the PRB area received 3 comments, revealing no new issues. External scoping in 2010 and 2011 for a proposed RMP amendment revealed no new issues outside of geographically-specific ones.

The BLM interdisciplinary team (ID team) conducted internal scoping by reviewing the proposed development and project location to identify potentially affected resources and land uses. This EA addresses those site-specific impacts that were unknown at the time of the PRB FEIS analysis that would help in making a reasoned decision or may be related to a potentially significant effect. The following resources/land uses are not present in the project area and will not be further analyzed:

Floodplains
Wilderness Values
Wild and Scenic Rivers
Environmental Justice
Areas of Critical Environmental Concern
Native American Religious Concerns
Prime or Unique Farmlands

Additionally, due to the active and ongoing permitting immediately within and adjacent to these APDs, BLM incorporates by reference these sections from Environmental Assessments:

True Fed 24-24H & True Fed 11-25H WY-070-EA14-16	North Tree Phase I WY-070-EA13-77	Dry Willow 5 WY-070-EA10-186	PRB FEIS WY-070-02-065
Soils & Vegetation: 3.2 & 4.2	Section 3.2 & 4.1.2	Section 3.2 & 4.1.1	PRB FEIS: 3-78-107, 4-134-152, 4-153-164, 4-393-394, 4-406
Groundwater 3.8.1 & 4.1.1	Section 3.3.1 & 4.1.3.1	Section 3.5.1 & 4.1.5.1	PRB FEIS: 3-1-30, 4-1-69, 4-392, 4-405
Surface Water 3.8.2 & 4.1.2	Section 3.3.2 & 4.1.4.1	Section 3.5.2 & 4.1.5.2	PRB FEIS: 4-85-86, 4-117-124, 3-36-56. 4-69-122, 4-393, 4-405
Invasive Species: 3.11 & 4.7	Section 3.5 & 4.1.6	Section 3.2.3 & 4.1.2	PRB FEIS: 3-103-108, 4-153-172

This EA analysis also tiers to and incorporated by reference the following – either as senior NEPA analysis or as substantially similar analysis in the semi-arid sage-brush, short grass prairie:

#	POD / Well Name	NEPA Document #	# / Type Wells	Decision Date
1	Sahara POD	WY-070-EA13-72	21 Oil	3/2013
2[a]	Mufasa Fed 11-31H Well	WY-070-EA12-062	1 Oil	3/2012
3	Spruce 1 POD	WY-070-CX3-12-95 & -107	2 Oil	5/2012
4[b]	Samson's Hornbuckle Field	WY-060-EA11-1181	48 Oil Well Pads	8/2011

a. Those sections describing and analyzing hydraulic fracturing, its supporting analysis, and the Greater Sage-grouse Section 3.7.12 and 4.8.2.

b. Those sections describing and analyzing hydraulic fracturing and its supporting analysis to include but not limited to traffic, water, and air quality.

2. PROPOSED PROJECT AND ALTERNATIVES

2.1. Alternative A – No Action

The No Action Alternative would deny these APDs, requiring True to resubmit APDs that comply with

statutes and the reasonable measures in the PRB RMP 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 – tiering to or incorporating by reference the analyses and developments approved by the subsequent NEPA analyses for adjacent and intermingled developments to the proposal area (Table 2.1).

Table 2.1. Approved NEPA Analyses Adjacent to and Intermingled with 24-24H & 11-25H.

POD Name	NEPA Document	Well # /	Approval
North Tree Phase I	WY-070-EA13-77	Oil / 18	3/26/2013
South Butte	WY-070-390CX3-12-236 to 390CX3-12-250	CBNG / 15	9/28/2012
Chasm	WY-070-EA11-050	CBNG / 11	6/29/2011
All Day	WY-070-EA08-026 (Modified Decision Record)	CBNG / 42	4/8/2011
Dry Willow 5	WY-070-EA10-186	CBNG / 27	8/12/2010
Dry Willow 3	WY-070-EA08-036	CBNG / 43	9/24/2008

2.2. Alternative B Proposed Action

Table 2.1. Well Name/#/Lease/Location:

Well Name & Number	Qtr	Sec	Twn	Rng	Lease #	Status
True Fed 24-24H	SESW	24	43N	76W	WYW153076	APD
True Fed 11-25H	NWNW	25	43N	76W	WYW153076	APD

County: Campbell County

Operator/Applicant: True Oil, LLC (True).

Surface Owners: T-Chair Land Company (Well Locations). Jacques W. Scott (portion of disturbed access route).

Overview: True proposes drilling and developing 2 horizontal oil wells, True Fed 24-24H and True Fed 11-25H, into federal mineral estate from two separate pad locations on fee surface. The proposed wells are approximately 60 miles south of Gillette, Wyoming and 26 miles west of the town of Wright, in Campbell County. Table 2.1 above describes the surface location. The primary objective is to drill to the Shannon Formation at 9,914 feet and 10,081 feet total vertical distance, respectively. Associated infrastructure includes access roads to the well pads and upgrading the existing crossing at Dry Willow Creek. Additional infrastructure may include above-ground power lines, currently there are none in the area. If above-ground power is not available before the wells begin production, temporary generators would be used to provide power to each pad. True anticipates the life of each productive well would be approximately 40 years. The Wyoming Oil and Gas Conservation Commission (WOGCC) earlier approved wells in the project area producing fee leases in addition to the federal leases being approved by the BLM. True, as well as other Operators, are currently developing plans for drilling and completion of these fee and federal wells. The True Fed 24-24H & True Fed 11-25H wells access and pad consists of approximately 14 acres of disturbance.

Drilling, Construction and Production Design Features Include:

- True Oil, LLC anticipates completing drilling and construction in 2 years. Drilling and construction is year-round in the region. Weather may cause delays but delays rarely last multiple weeks. Timing limitations in the form of conditions of approval (COAs) and/or agreements with surface owners may impose longer temporal restrictions.
- A road network consisting of existing improved roads.
- Engineering a portion of the existing road crossing at Dry Fork Creek and reclaiming the existing

route that will no longer be used.
- Potential production facilities including a pumping unit, a 3 tank battery, and 6 feet D x 20 feet L heater treater located on the well pad and placed on the cut portion of the location, a minimum of 20 feet from the toe of the back cut.
- A generator will supply temporary, not to exceed 6 months, power to the pumping unit and lease control equipment. Gas produced from the well will be used and/or propane trucked to the location for the generator.
- No pipelines are anticipated at this time and oil will be trucked off the location.
- Water for drilling will be supplied from the Pumpkin Buttes WSW #1, Permit #P131197.0W, located in Section 36, T44N R76W. Water will be truck hauled to the well locations.
- True estimates that a total of 33,000 bbls of water will be required for drilling (15,000 bbls) and completion/hydraulic fracturing (18,000 bbls) per well.
- Completion return fluids will be transported to one of two permitted disposal pits: Waste Water Energy, #10-461, T46N R74W Section 17 and/or McBeth Disposal Facility, #81-470R, T46N R74W Sections 19, 20.

Drilling and Completion Water Sources and Amounts

The proposed project is to horizontally drill and develop 2 oil wells located on two separate pads into the Shannon Formation. The project would be subject to the COAs for drilling of an oil/gas well in the BFO jurisdiction. Operator plans obtaining fresh water from the Pumpkin Buttes WSW #1, Permit #P131197.0W, located in Section 36, T44N R76W. A water analysis from the Pumpkin Buttes WSW #1 is shown as Operator's Transmittal of Laboratory Analytical Results, located in the drilling plan included with the APDs. The depth of the Fox Hills Formation is about 7,008-7,078 feet within the proposed project boundary.

For a detailed description of design features and construction practices associated with the proposal, refer to the surface use (SUP) and drilling plans included with the individual APDs. Also see the subject APDs for maps showing the proposed well location and associated facilities described above.

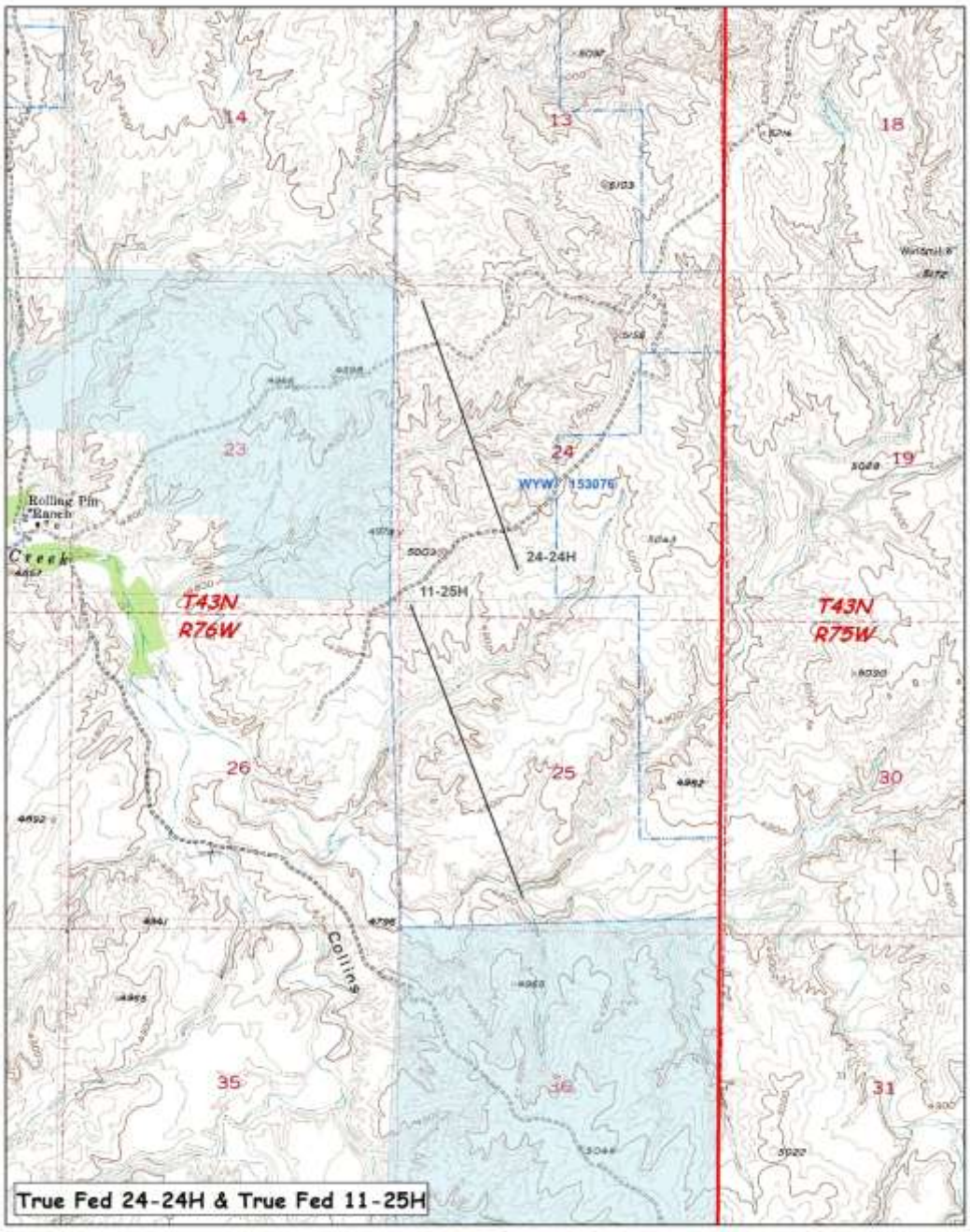
Table 2.2. Disturbance Summary for 24-24H and 11-25H wells:

Facility	Number or Miles	Factor	Disturbance
Proposed Engineered Pad: **24-24H**	1 (450 ft x 350 ft)	157,500 sq ft	4.32 acres
Fenced Area	517 ft x 521 ft	-	5.84 acres
Proposed Access Road	611.05 ft x 30 ft	0.12 miles	0.42 acres
Total Disturbance			*6.26 acres*
Proposed Engineered Pad: **11-25H**	1 (450 ft x 350 ft)	157,500 sq ft	4.45 acres
Fenced Area	513 ft x 564 ft	-	6.47 acres
Proposed Access Road	125.97 ft x 30 ft	0.02 miles	0.09 acres
Total Disturbance			*6.56 acres*
Engineered Crossing at Dry Fork	1,450 ft x 30 ft	43,500 sq ft	0.99 acres
Proposed Overhead Power	0		0.0
Total Surface Disturbance			**13.81 acres**

Table 2.3. Well Pad Area Totals (fenced area)

Well PAD	Surface Disturbance (Acres)	Interim Disturbance (Acres)
True Fed 24-24H	5.84	2.59
True Fed 11-25H	6.47	2.52
Totals	**12.31**	**5.11**

Figure 2.1. Top & Bottom Hole Locations for True Fed 24-24H & True Fed 11-25H Wells



BLM's jurisdiction for this proposal is split estate jurisdiction (non-federal surface over federal minerals) "public lands" Federal Land Policy Management Act (FLPMA), Sec. 103(e). Recommended mitigation measures are in the individual 24-24H and 11-25H Surface Use Plans, WY-070-EA14-16 and BLM Recommended COAs for Conventional Application for Permit to Drill. Drilling and producing mitigations are in Conditions of Approval for Conventional Application for Permit to Drill.

BLM incorporated and analyzed the implementation of committed mitigation measures in the SUPs and drilling plans, in addition to the COAs in the PRB FEIS ROD, as well as changes made at the onsite.

Additionally, True Oil, LLC, in their APD, committed to:

1. Comply with the approved APD, applicable laws, regulations, orders, and notices to lessees.
2. Obtain necessary permits from agencies.
3. Offer water well agreements to the owners of record for permitted wells.
4. Incorporate several measures to alleviate resource impacts into their submitted surface use plan and drilling plan.
5. Certify it has a surface access agreement with the landowners or posted a 43 CFR 3814.1 bond.
6. Complete engineering to an existing crossing at Dry Willow Creek and reclaim the unused portion of the existing route that will no longer be used.
7. Per participation in the *T-Chair North Ranch Road Cost Sharing Agreement*, will assume their share of the maintenance and improvements required for access roads during the operation and throughout the abandonment of these wells.
8. Reduce well pads in size to accommodate production facilities. Areas no longer needed that are reclaimed will also be fenced after seeding to help establish a seed bed.
9. Any changes to the proposed layout and/or plan will be submitted via Sundry Notice to the BLM for approval prior to commencement of work.

True estimates that during the drilling phase of each individual well (about a 6 week period per well) the average daily truck traffic to and from the location is approximately 5-6 large trucks (water haulers, cement trucks, etc.) and 7-8 personal pickup trucks per day. True also estimates that during the well completion process (approximately a 7-10 day period per well) the average daily traffic and number of personal pickup trucks per day remains the same. Finally, during the production phase the average daily traffic will decrease to approximately 1 pickup truck per day.

Reasonable and Foreseeable Development

It is reasonably foreseeable that if True's project is moderately successful that companies will likely fill in development for fluid minerals in the Shannon and other formations within several miles of the proposal to the extent that is economically feasible. True is planning to submit additional APD's within the project area. While the specifics of these additional APDs are unknown at this time, the area of development is known. These APDs will likely be tiered to this EA's project area for the affected environment analysis and, to the extent known, the anticipated cumulative effects analysis.

Description of Proposed Mitigation Measures:

Implementation of committed mitigation measures contained in the surface use plan of operations and drilling plan, in addition to the COAs, would ensure that no adverse environmental impacts would result from approval of the proposed action.

2.3. Conformance with 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, 2001, 2003, 2011, and generally conforms to the terms and conditions of that land use plan, its amendments, and supporting FEISs, 1985, 2003.

3. AFFECTED ENVIRONMENT

This section briefly describes the physical and regulatory environment affected by the alternatives in Section 2. Aspects of the affected environment here focus on the major issues.

Project Area Description

The topography consists of moderately rough terrain with deep draws. The major vegetation/habitat type encompassing the well site area is a mixed-grass prairie. The dominate species include Wyoming big sagebrush and big sagebrush mixed with various types of grasses. The elevation within the project area

ranges from approximately 4,983 feet to 4,999 feet above sea level. Livestock grazing has been the primary historic land use within the project area. Oil and gas development has become the predominant land use in recent years.

Table 3.1. Adjacent or Overlapping Development

POD Name	NEPA Document	Well # /	Approval
North Tree Phase I	WY-070-EA13-77	Oil / 18	3/26/2013
South Butte	WY-070-390CX3-12-236 to 390CX3-12-250	CBNG / 15	9/28/2012
Chasm	WY-070-EA11-050	CBNG / 11	6/29/2011
All Day	WY-070-EA08-026 (Modified Decision Record)	CBNG / 42	4/8/2011
Dry Willow 5	WY-070-EA10-186	CBNG / 27	8/12/2010
Dry Willow 3	WY-070-EA08-036	CBNG / 43	9/24/2008

Table 3.2. This Project Tiers to these NEPA Documents, in Addition to the PRB FEIS.

POD Name	NEPA Document	Well Type & #	Approval
North Tree Phase I	WY-070-EA13-77	Oil / 18	3/26/2013
Dry Willow 5	WY-070-EA10-186	CBNG / 27	8/12/2010

Table 3.3. BLM Incorporates by Reference Here These Sections from Environmental Assessments

True Fed 24-24H & True Fed 11-25H WY-070-EA14-16	North Tree Phase I WY-070-EA13-77	Dry Willow 5 WY-070-EA10-186	PRB FEIS WY-070-02-065
Soils & Vegetation: 3.2 & 4.2	Section 3.2 & 4.1.2	Section 3.2 & 4.1.1	PRB FEIS: 3-78-107, 4-134-152, 4-153-164, 4-393-394, 4-406
Groundwater 3.8.1 & 4.1.1	Section 3.3.1 & 4.1.3.1	Section 3.5.1 & 4.1.5.1	PRB FEIS: 3-1-30, 4-1-69, 4-392, 4-405
Surface Water 3.8.2 & 4.1.2	Section 3.3.2 & 4.1.4.1	Section 3.5.2 & 4.1.5.2	PRB FEIS: 4-85-86, 4-117-124, 3-36-56. 4-69-122, 4-393, 4-405
Invasive Species: 3.11 & 4.7	Section 3.5 & 4.1.6	Section 3.2.3 & 4.1.2	PRB FEIS: 3-103-108, 4-153-172

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. The Environmental Protection Agency (EPA) established ozone standards in 2008, finalizing them 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 1 of the nation's 40 "nonattainment" zones for ozone in 2012; in addition to PRB-area air quality alerts issued in 2011 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 6 sites, and particulate concentrations from 5 of those sites, monitors speciated aerosol (3 locations), and evapotranspiration rates (3 locations). These sites are at Sheridan, Taylor Reservoir, South Coal Reservoir, Buffalo, Juniper, 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.

Existing air pollutant emission sources in the region include:

- Exhaust emissions (primarily CO and nitrogen oxides (NOx)) 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;
- 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;
- NOx, PM, and other emissions from diesel trains and,
- SO2 and NOx from power plants.

3.2. Soils, Ecological Sites and Vegetation

The implementation of this proposal will be similar to those analyzed in Table 3.1 above, which is adjacent, overlapping, or have similar characteristics to these wells. Soils, ecological sites, and vegetation found at the True Fed 24-24H and True Fed 11-25H well location(s) are similar to those occurring in the North Tree Phase I POD WY-070-EA13-77, Dry Willow 5 POD WY-070-EA10-186 and PRB FEIS WY-070-02-065, see Table(s) 3.2 and 3.3 above, and are incorporated here by reference:

1. North Tree Phase I POD, WY-070-EA13-77: Section 3.2 (pp. 9-12).
2. Dry Willow 5 POD, WY-070-EA10-186: Section 3.2 (pp. 10-13).
3. The PRB FEIS identified soils, ecological sites, and vegetation common to the project area: (pp. 3-78-107, 4-134-152, 4-153-164, 4-393-394 and 4-406).

3.3. Water Resources

WDEQ regulates Wyoming's water quality with EPA oversight. 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. Fresh water used for drilling and completions will be supplied from the Pumpkin Buttes WSW #1, Permit #P131197.0W, located in Section 36, T44N R76W. About 15,000 bbls of water would be required for drilling and 18,000 bbls of water for completion/hydraulic fracturing per well, for a total of approximately 33,000 bbls (4.25 acre-feet) of water required per well. Completion return fluids will be transported to one of two permitted disposal pits: Waste Water Energy, #10-461, T46N R74W Section 17 and/or McBeth Disposal Facility, #81-470R, T46N R74W Sections 19, 20.

3.3.1. Groundwater

The historical use for groundwater in this area was for stock water purposes. There are 11 producing CBNG wells within 1 mile of the project wells. A search of the WSEO Ground Water Rights Database showed 3 registered stock water wells within 1 mile of the proposed wells in the project area with depths from 650 to 690 feet (no depth was reported for the additional stock well in a search performed November, 2013).

Groundwater will be similar to that analyzed in Table 3.1 above, which is adjacent, overlapping, or have similar characteristics to these wells. Groundwater characteristics are most similar to those occurring in the North Tree Phase I POD WY-070-EA13-77, Dry Willow 5 POD WY-070-EA10-186, and PRB FEIS WY-070-02-065, see Tables 3.2 and 3.3 above, and are incorporated here by reference:

1. North Tree Phase I POD, WY-070-EA13-77: Section 3.3.1 (pp. 12).
2. Dry Willow 5 POD, WY-070-EA10-186: Section 3.5.1 (pp. 25-26).
3. Refer to the PRB FEIS for additional information on groundwater, (pp. 3-1 to 3-36).

3.3.2. Surface Water

The implementation of this proposal will be similar to those analyzed in Table 3.1 above, which is adjacent, overlapping, or have similar characteristics to these wells. The True Fed 24-24H and True Fed 11-25H well locations are on a ridgeline, high above an unnamed tributary of Cottonwood Creek. Surface waters in the general area similar to those occurring in the North Tree Phase I POD WY-070-EA13-77, Dry Willow 5 POD WY-070-EA10-186, and PRB FEIS WY-070-02-065, see Tables 3.2 and 3.3 above, and are incorporated here by reference:

1. North Tree Phase I POD, WY-070-EA13-77: Section 3.3.2 (pp. 12).
2. Dry Willow 5 POD, WY-070-EA10-186: Section 3.5.2 (pp. 27).
3. Refer to the PRB FEIS for additional information on surface water, (pp. 3-36 to 3-56).

True Oil, LLC identified no natural springs within a 1 mile radius of True Fed 24-24H & True Fed 11-25H APDs. See generally the PRB FEIS for a surface water quality discussion, pp. 3-48 to 3-49.

3.4. Wetlands/Riparian

The True Fed 24-24H & True Fed 11-25H APD projects and development will not disturb wetlands.

3.5. Invasive Species

The project proponent discovered the following state-listed noxious weeds and invasive/exotic plant infestations by a search of inventory maps and/or databases or during subsequent field investigation: Canada thistle, musk thistle and leafy spurge. Cheatgrass or downy brome (*Bromus tectorum*) and to a lesser extent, Japanese brome (*B. japonicus*) are known to exist in the affected environment. These 2 species, cheatgrass and Japanese brome, are found in high densities and numerous locations throughout NE Wyoming.

3.6. Fish and Wildlife

The PRB FEIS identified wildlife species occurring in the PRB, pp. 3-113 to 3-206. BLM wildlife biologists performed a habitat assessment in the project area on November 8, 2012. 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, WGFD datasets, and the Wyoming Natural Diversity Database (WYNDD) to evaluate the affected environment for wildlife species that may occur in the project area. This section describes the affected environment and impacts to wildlife known or likely to occur in the area of the proposed project.

3.6.1. Big Game

The big game species occurring in the project area are pronghorn (yearlong/winter year long), and mule deer (winter yearlong). Yearlong use is when a population of animals makes general use of suitable documented habitat sites within the range on a year-round basis. Animals may leave the area under severe conditions. Winter-yearlong use is when a population or a portion of a population of animals makes general use of the documented suitable habitat sites within this range on a year-round basis, but during the winter months there is a significant influx of additional animals into the area from other seasonal ranges. The PRB FEIS discussed the affected environment for pronghorn, and mule deer on pp. 3-117 to 3-122, pp. 3-127 to 3-132, 3-122 to 3-128, and 3-132 to 3-140, respectively.

3.6.2. Non-Game

3.6.2.1. Raptors

The PRB FEIS discussed the affected environment for raptors, pp. 3-141 to 3-148. According to the BLM raptor database eleven historical nests occur within 0.5 mile of the True Fed 24-24H and True Fed 11-25HT well pads, however the nests are 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). One of the eleven nests has been occupied by a pair of Great-horned owls, the other 10 nests have not been documented occupancy during past spring surveys. Most raptor species nest in a variety of habitats including (but not limited to): native and non-native grasslands, agricultural lands, live and dead trees, cliff faces, rock outcrops, and tree cavities. Suitable nesting habitat is present in the project area.

3.6.3. Migratory Birds

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 powerlines 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.

A wide variety of migratory birds may be found in the proposed project area at some time throughout the year. Many species that are of high management concern use shrub-steppe and shortgrass prairie 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 WGFD Wyoming Bird Conservation Plan (Nicholoff 2003) identified 3 groups of high-priority bird species in Wyoming: Level I – those that clearly need conservation action, Level II – species where the focus is on monitoring, rather than active conservation, and Level III – species that are not a high priority but are of local interest. (Shrub-steppe vegetation dominates the project area.(use or vary to fit the project area) Many species that are of high management concern use shrub-steppe areas for their primary breeding habitats (Saab and Rich 1997). Nationally, grassland and shrubland birds declined more consistently in the last 30 years than any other ecological association of birds (WGFD 2009). Species that may occur in these vegetation types in northeast Wyoming, according to the Wyoming Bird Conservation Plan, appear Table 3.4., grouped by level as identified in the plan.

Several migratory species are also BLM special status (sensitive) species. Those suspected to occur in the project area including: *Baird's sparrow, Brewer's sparrow, loggerhead shrike, long-billed curlew, sage sparrow, and sage thrasher*. The PRB FEIS discussed the affected environment for migratory birds on pp. 3-150 to 3-153.

Table 3.4. Migratory Birds Occurring in Shrub-steppe Habitat, NE Wyoming (Nicholoff 2003)

Level	Species	WYBLM Sensitive	Species	WYBLM Sensitive
Level I	Brewer's sparrow	Yes	McCown's longspur	No
	Ferruginous hawk	Yes	Sage sparrow	Yes
Level II	Lark bunting	No	Sage thrasher	Yes
	Lark sparrow	No	Vesper sparrow	No
	Loggerhead shrike	Yes		
Level III	Common poorwill	No	Say's phoebe	No

3.6.4. Threatened, Endangered, Candidate, Special Status (Sensitive) Species

The Buffalo BLM receives a species list periodically from the FWS concerning threatened, endangered, proposed, and candidate species. The 2012 list included Ute Ladies'-tresses orchid (threatened) and Greater Sage-Grouse (candidate). In addition to the listed species, the FWS letter also included migratory birds and wetland/riparian habitats. Habitat for Ute Ladies'-tresses orchid does not occur within the project area and the species not likely to occur.

3.6.5. Candidate Species – Greater Sage-Grouse (GSG)

Suitable GSG habitat (as defined in Soehn, et al., 2001), is present in the proposed disturbance area. The Cottonwood Creek 2 lek is located within two miles of the proposed project. The PRB FEIS has a detailed discussion on GSG ecology and habitat, pp. 3-194 to 3-199.

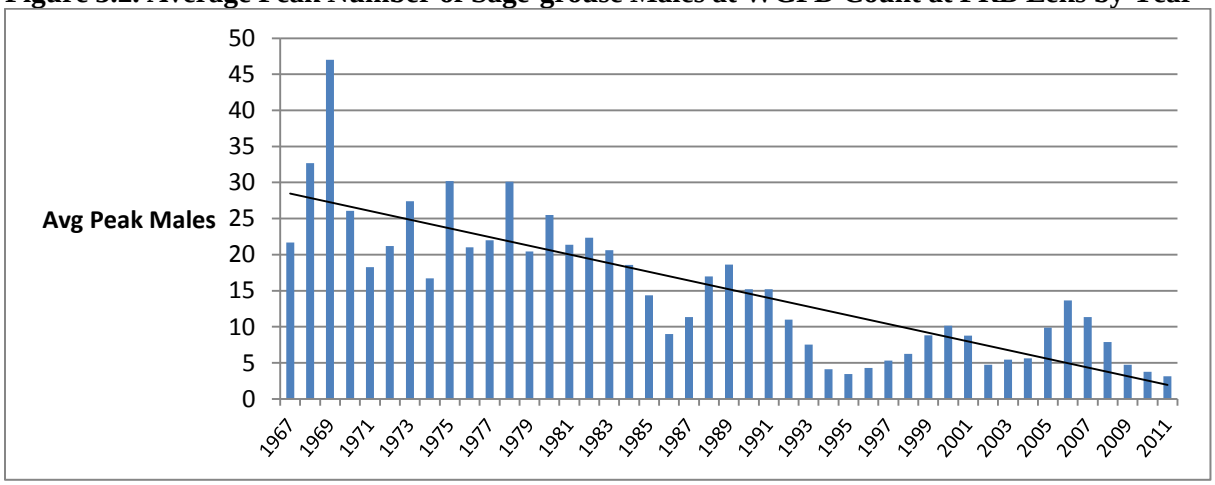
Subsequently the FWS determined the GSG warrants federal listing as threatened across its range, but precluded listing due to other higher priority listing actions, 75 Fed. Reg. 13910 to 14014, Mar. 23, 2010; 75 Fed. Reg. 69222 to 69294, Nov. 10, 2010. GSG are a WY BLM special status (sensitive) species (SSS) and a WGFD species of greatest conservation need because of population decline and ongoing habitat loss. The 2012 population viability analysis for the Northeast Wyoming GSG found there remains a viable population of GSG in the PRB (Taylor et al. 2012). However, threats from energy development and West Nile virus (WNv) are impacting future viability (Taylor et al. 2012). 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.

In its *Recommendations for Development of Oil and Gas Resources within Important Wildlife Habitats* (2009), WGFD categorized impacts to GSG by number of well pad locations per square mile within 2 miles of a lek and within identified nesting/brood-rearing habitats greater than 2 miles from a lek. Moderate impacts occur when well density is between 1 and 2 well pad locations per square mile or where there is less than 20 acres of disturbance per square mile. High impacts occur when well density is between 2 and 3 well pad locations per square mile or when there are between 20 and 60 acres of disturbance per square mile. Extreme impacts occur when well density exceeds 3 well pad locations per square mile or when there are greater than 60 acres of disturbance per square mile.

The GSG population in northeast Wyoming exhibited a steady long term downward trend, as measured by lek attendance (WGFD 2008b). Figure 3.1, below illustrates a 10-year cycle of periodic highs and lows. Each subsequent population peak is lower than the previous peak. The research described below suggests that these declines may be a result, in part, of CBNG development in this region of Wyoming and that the leks in the cumulative impact assessment area are experiencing similar declines.

Research shows that declines in lek attendance correlate with oil and gas development. Projections show in a typical PRB landscape that energy development within 2 miles of leks reduces the average probability of lek persistence from 87% to 5% percent (Walker et al. 2007). Several studies showed that well density is a useful metric for evaluating impacts to GSG, as measured by declines in lek attendance (Braun et al. 2002, Holloran et al. 2005, and Walker et al. 2007). These studies indicated that oil or gas development exceeding approximately 1 well pad per square mile, resulted in calculable impacts on breeding populations, as measured by the number of male GSG attending leks (State Wildlife Agencies' Ad Hoc Committee for Sage-Grouse and Oil and Gas Development 2008).

Figure 3.2. Average Peak Number of Sage-grouse Males at WGFD Count at PRB Leks by Year



3.6.6. Special Status (Sensitive) Species (SSS)

The PRB FEIS discussed the affected environment for SSS, p. 3-174 to 201. The authority for the SSS comes from the ESA, as amended; Title II of the Sikes Act, as amended; the FLPMA; Department Manual 235.1.1A and BLM Manual 6840. Table W in Appendix A, lists those SSS that may occur in the project area. The Table also includes a brief description of the habitat requirements for each species. Wyoming BLM annually updates its list of SSS to focus management to maintain habitats to preclude listing as a threatened or endangered species. The policy goals are:

- Maintaining vulnerable species and habitat components in functional BLM ecosystems;
- Ensuring sensitive species are considered in land management decisions;
- Preventing a need for species listing under the Endangered Species Act (ESA); and
- Prioritizing needed conservation work with an emphasis on habitat.

Wyoming BLM updates SSS on its website: http://www.blm.gov/wy/st/en/programs/Wildlife.html. BLM discusses those SSS impacted beyond the level analyzed in the PRB FEIS, below.

3.6.6.1. Loggerhead Shrike

The PRB FEIS discussed the affected environment for loggerhead shrike, p. 3-187. Sagebrush grasslands and juniper in the project area provide suitable nesting habitat for loggerhead shrikes. Biologists suspect the species occurs in the PRB.

3.6.6.2. Sage Thrasher

The PRB FEIS discussed the affected environment for sage thrasher, pp. 3-199 to 3-200. Sagebrush grasslands in the project area provide suitable nesting habitat for sage thrasher.

3.6.6.3. Brewer's Sparrow

The PRB FEIS discussed the affected environment for Brewer's sparrow, p. 3-200. Sagebrush grassland areas in the project area provide suitable nesting habitat for Brewer's sparrows, and the species is suspected to occur.

3.6.6.4. Baird's Sparrow

The PRB FEIS discussed the affected environment for Baird's sparrow, p. 3-188. Grassland areas in the project area may provide suitable nesting habitat for Baird's sparrows.

3.7. Cultural Resources

In accordance with section 106 of the National Historic Preservation Act, 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 that are generally found within BFO the reader is referred to the Draft Cultural Class I Regional Overview, Buffalo Field Office (BLM, 2010). Previously accepted class III (intensive) cultural resource inventories (BFO project no. 70120090 and 70130027) covered the currently proposed project area. No cultural resources are located in or near the proposed project area.

4. ENVIRONMENTAL EFFECTS

For a discussion of Alternatives A and B environmental consequences see Powder River Basin Oil and Gas Project Final Environmental Impact Statement, WY–070–02–065. This section describes the environmental consequences of the proposed action, Alternative B. The effects analysis addresses the direct and indirect effects of implementing the proposed action, the cumulative effects of the proposed action combined with reasonably foreseeable federal and non-federal actions, identifies and analyzes mitigation measures (COAs), and discloses any residual effects remaining following mitigation.

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. 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, tribal, or federal air quality standards and this project is well within the projected development parameters.

4.2. Soils, Ecological Sites and Vegetation

Soils, ecological sites, and vegetation found at the True Fed 24-24H and True Fed 11-25H wells are similar to those occurring in the North Tree Phase I POD WY-070-EA13-77, Dry Willow 5 POD WY-070-EA10-186, and PRB FEIS WY-070-02-065, see Tables 3.2 and 3.3, above, and are incorporated here by reference: Description of Affected Environment; and Direct and Indirect, Cumulative, Residual Effects. Impacts anticipated occurring and mitigation considered will be similar to those analyzed in the following EAs which are adjacent or overlapping and are incorporated here by reference:

1. North Tree Phase I POD, WY-070-EA13-77: Direct and Indirect Effects (pp. 29-32); Cumulative Effects (p. 32-33); Residual Effects (p. 33).
2. Dry Willow 5 POD, WY-070-EA10-186: Direct and Indirect Effects (pp. 22-23); Cumulative Effects (pp. 23); Residual Effects (pp. 24).
3. The PRB FEIS identified impacts from development which are common to most disturbances, (pp. 4-134 to 150).
4. The PRB FEIS discusses most direct and indirect effects to ecological sites and vegetation, (pp. 4-153 to 4-164).

The Operator should follow the reclamation requirements in the BLM State Wide Reclamation Policy found at: http://www.blm.gov/wy/st/en/programs/reclamation. See mitigation section in the soils section above for a full description of the policy as it applies equally to ecological sites.

The BLM considers these residual effects from Alternative B with proposed wells 24-24H and 11-25H are likely within the parameters for acceptable surface disturbance and surface disturbance reclamation in PRB FEIS ROD and Onshore Order Number 1.

4.3. Water Resources

The historical use for groundwater in this area was for stock water. A search of the WSEO Ground Water Rights Database showed 3 registered stock water wells within 1 mile of the proposed wells in the project area with depths ranging from 650 to 690 feet, a no value was indicated on one of the wells searched. For additional information on groundwater, refer to the PRB FEIS, Affected Environment, pp. 3-1 to 3-36.

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 any fresh water aquifers above the target coal zone. This will ensure that ground water will not be adversely impacted by well drilling and completion operations. True has stated in their drilling plan(s) that all fresh water encountered during drilling operations will be recorded by depth and protected with casing and cement. The top of the Fox Hills formation for the 24-24H and 11-25H is estimated 7,008 feet total vertical distance (TVD) and 7,175 feet TVD, respectively. True explains in their drilling plan, for these wells, that cement will be circulated from the shoe, back to 6,500 feet, TVD. Centralizers will be placed on every joint throughout the Fox Hills Formation.

At the time of permitting, the volume of water that will be produced in association with these federal minerals is unknown. The operator will have to produce the wells for a time to be able to estimate the water production. In order to comply with the requirements of Onshore Oil and Gas Order #7, Disposal of Produced Water, the operator will submit a Sundry to the BLM within 90 days of first production which includes a representative water analysis as well as the proposal for water management.

Historically, the quality of water produced in association with conventional oil and gas has been such that surface discharge would not be possible without treatment. Initial water production is quite low in most cases. There are three common alternatives for water management: Re-injection, deep disposal or disposal into pits. All alternatives would be protective of groundwater resources when performed in compliance with state and federal regulations.

4.3.1. Groundwater

4.3.1.1. Direct and Indirect Effects

Impacts anticipated occurring and mitigation considered will be similar to those analyzed in the following EAs which are adjacent or overlapping and are incorporated here by reference:

1. North Tree Phase I POD, WY-070-EA13-77: Direct and Indirect Effects (pp. 24-25); Cumulative Effects (p. 25); Residual Effects (p. 26).
2. Dry Willow 5 POD, WY-070-EA10-186: Direct and Indirect Effects (pp. 43-45); Cumulative Effects (pp. 45); Residual Effects (pp. 46).
3. The PRB FEIS: Direct and Indirect Effects (pp. 4-5, 4-54); Cumulative Effects (pp. 4-64, 65)

4.3.2 Surface Water

4.3.2.1. Direct and Indirect Effects

Impacts anticipated occurring and mitigation considered will be similar to those analyzed in the following EAs which are adjacent or overlapping and are incorporated here by reference:

1. North Tree Phase I POD, WY-070-EA13-77: Direct and Indirect Effects (pp. 29-32); Cumulative Effects (p. 32-33); Residual Effects (p. 33).
2. Dry Willow 5 POD, WY-070-EA10-186: Direct and Indirect Effects (pp. 46-49); Cumulative Effects (pp. 49-50); Residual Effects (pp. 51).
3. The PRB FEIS: Direct and Indirect Effects (pp. 4-74 to 4-86); Cumulative Effects (Volume 2, pp. 4-115-117, table 4-13); Residual Effects (pg. 4-118).

4.4. Invasive Species

4.4.1. Direct and Indirect Effects

The operator has committed to the control of noxious weeds and species of concern using the following measures identified in their Integrated Pest Management Plan (IPMP):

1. Control Methods, including frequency
2. Preventive practices
3. Education

Cheatgrass or downy brome (*Bromus tectorum*) and to a lesser extent, Japanese brome (*B. japonicus*) Canada thistle, musk thistle and leafy spurge exist in the affected environment. Cheatgrass and Japanese brome are found in such high densities and numerous locations throughout NE Wyoming that a control program is not presently feasible. The use of existing facilities along with the surface disturbance associated with construction of proposed access roads, pipelines, and related facilities would present opportunities for weed invasion and spread. The activities related to the performance of the proposed project would create a favorable environment for the establishment and spread of noxious weeds/invasive plants. However, mitigation as required by BLM applied COAs will reduce potential impacts from noxious weeds and invasive plants.

4.4.2. Cumulative Effects

The activities related to the performance of the proposed project would create a favorable environment for the establishment and spread of noxious weeds/invasive plants.

4.4.3. Mitigation Measures

The operator has committed to the control of noxious weeds and species of concern using the following measures identified in their Integrated Pest Management Plan (IPMP):

1. Control Methods include cultural, physical, chemical, and biological methods:
   Cultural methods include prompt reseeding and revegetation of areas of disturbed soils with certified weed free seed mix, minimizing soil disturbance, weed free mulch for erosion control and favored growth of grasses and alfalfa through good management. Physical methods include hand pulling, digging or root cutting if areas are small or infestations are new, prescribed burning in conjunction with herbicides may also be effective for Canada Thistle and Leafy Spurge. Chemical methods include the use of herbicides, done in accordance with the existing Surface Use Agreement with the private surface owner. Biological methods include the use of stem and root boring beetle, four root mining beetles and a shoot tip gall midge have shown impressive results on Leafy Spurge.
2. Preventive practices: Certified weed-free seed mixtures will be used for re-seeding.
3. Education: True Oil will provide periodic weed education and awareness programs for its employees and contractors through the county weed districts and federal agencies. Field employees and contractors will be notified of known noxious weeds or weeds of concern in the project area.

4.4.4. Residual Effects

Control efforts by the operator are limited to the surface disturbance associated the implementation of the project. Cheat grass and other invasive species that are present within non-physically disturbed areas of the project area are anticipated to continue to spread unless control efforts are expanded. Cheatgrass and to a lesser extent, Japanese brome (*B. japonicus*) are found in such high densities and numerous locations throughout NE Wyoming that a control program is not considered feasible at this time; these annual bromes would continue to be found within the project area.

4.5. Fish and Wildlife

4.5.1. Big Game

4.5.1.1. Direct and Indirect Effects

The PRB FEIS analyzed impacts to big game, pp. 4-181 to 4-210. The current populations for pronghorn and mule deer are within the WGFD goals, respectively.

4.5.2. Cumulative Effects

Refer to the PRB FEIS for big game cumulative impacts, p. 4-211.

4.5.3. Non-Game

4.5.3.1. Raptors

4.5.3.1.1. Direct and Indirect Effects

The PRB FEIS analyzed direct and indirect effects to raptors, pp. 4-216 to 4-221. This project will result in disturbance in proximity of nesting raptors, including direct loss of foraging habitats and indirect losses associated with declines in habitat effectiveness. 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 to the area and resulting in increased nest predation.

To reduce the risk of decreased productivity or nest failure, the BLM BFO requires a 0.5 mile radius timing limitation during the breeding season around active raptor nests and recommends all infrastructures requiring human visitation be located to provide adequate biologic buffer for nesting raptors. 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.

4.5.3.1.2. Cumulative Effects

The cumulative effects associated with Alternative #B are within the analysis parameters and impacts described in the PRB FEIS. Refer to the PRB FEIS for details on expected cumulative impacts, p. 4-221.

4.5.3.1.3. Mitigation Measures

The BLM BFO requires a 0.5 mile radius timing limitation during the breeding season around active raptor nests to reduce the risk of decreased productivity or nest failure.

4.5.3.1.4. Residual Impacts

Even with timing restrictions, raptors may abandon nests due to foraging habitat alteration associated with development or sensitivity to well or infrastructure placement. 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 of the project. Routine human activities near these nests can draw increased predator activity to the area and increase nest predation. Declines in breeding populations of some species that are more sensitive to human activities may occur.

4.5.3.2. Migratory Birds

4.5.3.2.1. Direct and Indirect Effects

The PRB FEIS discussed the direct and indirect effect to migratory birds, pp. 4-231 to 4-235. Disturbance of habitat in the project area is likely to impact migratory birds. Native habitats will be lost directly with the construction of wells, roads, and pipelines. Activities will likely displace migratory birds farther than the immediate area of physical disturbance. Ingelfinger (2004) identified that the density of breeding Brewer's sparrows declined by 36% and breeding sage sparrows declined by 57% within 100 m of dirt roads in a natural gas field. Effects occurred along roads with light traffic volume (less than 12 vehicles per day). The increasing density of roads constructed in developing natural gas fields exacerbated the

problem creating substantial areas of impact where indirect habitat losses through displacement were much greater than the direct physical habitat losses.

4.5.3.2.2. Cumulative Effects

The cumulative effects associated with alternative B are within the analysis parameters and impacts described in the PRB FEIS. Refer to the PRB FEIS, p. 4-235, for details on expected cumulative impacts.

4.5.3.2.3. Mitigation Measures

GSG and raptor timing limitations on surface disturbing activities will also serve to mitigate impacts to nesting migratory birds. Raptor protections are put in place to avoid potential violations of the MBTA, making the guidance for seasonal timing relevant to the migratory bird issue as well. Specific conservation measures to protect migratory birds are not included in the current land use plan, as updated and amended. Although the PRB FEIS ROD addressed the potential impacts from oil and gas development to migratory birds, it did not specifically identify activities to help mitigate those impacts. The RMP is currently under revision, and a change in management for migratory birds is being considered among the alternatives. Until the revision is complete, the BFO will provide project level site-specific analysis of conservation measures implemented for migratory bird protection, and compliance with the MBTA.

BLM provided some level of protection for migratory bird nesting through timing limitations applied to CBNG plans of development for GSG and raptor nesting. Many CBNG projects (consisting of multiple wells) covered large areas that either encompassed GSG nesting habitat or raptor nests. Timing limitations applied as COAs for those projects were likely to also protect migratory birds during the nesting season by effectively limiting the development in a project area during grouse and raptor breeding seasons. Operators were likely to wait to construct facilities until limitations had been lifted for the entire area, in order to cut down on labor costs and difficulties from completing only small portions of the project at a time. With conventional oil projects, where less wells are proposed and development is more complicated, operators will most likely start construction as soon as possible, which could be during the migratory bird nesting season if the proposed area is not within 2 miles of a GSG lek or no active raptor nests are located. The shift in proposed projects from multi-well CBNG projects to single conventional wells, and in turn reducing secondary protections to migratory birds, constitutes a "change in circumstances" (43 CFR 1610.5-6) that should be addressed at the project level until issues can be resolved in a land use plan.

Nesting in Brewer's sparrows (a BLM SSS) typically occurs mid-May to mid-July. Some young fledge in late July. Sage thrashers (BLM sensitive species) may lay a second clutch of eggs as late as mid-July. Lark sparrows in northern latitudes lay eggs from early May to mid-July (information on breeding habits available on the Birds of North America Online website: http://bna.birds.cornell.edu/bna). GSG timing limitations on surface disturbing activities will mitigate impacts to nesting migratory birds from March 15 to June 30. However, several species of birds, listed above, are likely to still have eggs or nestlings into July. BLM biologists have observed active Brewer's sparrow nests containing eggs during the last week of June. Only a percentage of known nests are active any given year, so the protections for migratory birds from June 30 to July 31 will depend on how many raptor and mountain plover nests are active. The least restrictive measures (in this case only applying GSG timing limitations) are inadequate to protect all nesting migratory birds that may inhabit the project area.

To reduce the likelihood of a "take" under the MBTA, the BLM biologist recommends that pad construction (vegetation removal) occur outside of the breeding season for the greatest quantity of BLM sensitive passerines (May 1- July 31) where suitable nesting habitat for sagebrush obligates is present. This restriction would apply to habitat removal, unless a pre-construction nest search (within approximately 10 days of construction planned May 1-July 31) is completed. If surveys will be

conducted, the operator will coordinate with BLM biologists to determine protocol. The nest search will consist of in areas where vegetation will be removed or destroyed. The BLM recommends the True Fed 24-24H & True Fed 11-25H well pads and associated infrastructure have timing limitations applied for habitat removal during the nesting season for sagebrush obligate passerines (May 1 to July 31).

Timing limitations for GSG (True Fed 24-24H & True Fed 11-25H well pads; March 15 to June 30), active raptor nests (True Fed 24-24H & True Fed 11-25Hs well pads); Feb 1 to July 31 all begin prior to timing limitations for sagebrush obligates, and thus may provide additional protection where migratory bird nesting periods and habitats overlap.

The BLM also recommends that measures are taken to ensure that migratory birds are excluded from all facilities that pose a mortality risk, including, but not limited to, heater treaters, flare stacks, secondary containment, and standing water or chemicals where escape may be difficult or hydrocarbons or toxic substances are present.

4.5.3.2.4. Residual Effects

If restrictions on habitat removal, or clearance surveys, are not applied, the BLM would not be in conformance with the MBTA, the BLM-FWS MOU, or BLM IM No. 2013-005. If the restriction on habitat removal is applied, it is unlikely that active nests will be destroyed, as most nestlings will have fledged by August 1. Nests initiated after the first week in July may be destroyed by construction after August 1st. Migratory birds nesting adjacent to the well pad or road may be disturbed by construction and production activities. A timing limitation does nothing to mitigate loss and fragmentation of habitat. Suitability of the project area for migratory birds will be negatively affected due to habitat loss and fragmentation and proximity of human activities associated with oil and gas development.

4.6. Threatened, Endangered, Candidate, Special Status (Sensitive) Species

Based on the last species list for the Buffalo Field Office, dated July 22, 2011, the Ute Ladies'-tresses Orchid is the only listed species requiring an effects determination (ESA Section 7 (2)).

4.6.1. Threatened and Endangered Species

4.6.1.1. Ute Ladies'-Tresses Orchid (ULT)

Based on the last species list for the Buffalo Field Office, dated July 22, 2011, the Ute Ladies'-tresses Orchid is the only listed species requiring an effects determination, ESA Section 7 (2).

4.6.1.1.1. Direct and Indirect Effects

Suitable habitat is not present in the project area and implementation of the proposed project will have "***no effect***" on ULT.

4.6.1.1.2. Cumulative Effects

The PRB FEIS discussed the cumulative effects to ULT, pp. 4-253 to 4-254).

4.6.1.1.3. Mitigation Measures

BLM proposes no mitigation.

4.6.1.1.4. Residual Effects

BLM anticipates no residual effects.

4.6.2. Candidate Species Greater Sage-Grouse (GSG)

4.6.2.1. Direct and Indirect Effects

Implementation of the proposed project will impact GSG habitat and individuals. Impacts to GSG are generally a result of loss and fragmentation of sagebrush habitats associated with roads and infrastructure.

The *12-Month Findings for Petitions to List the Greater Sage-Grouse (Centrocercus urophasianus) as Threatened or Endangered* (FWS 2010) and chapters 15-21 of Greater Sage-Grouse Ecology and Conservation of a Landscape Species and its Habitats (Knick and Connelly 2011) – both discuss impacts to GSG associated with energy development in detail. Implementation of the project will adversely impact nesting habitat, both through direct loss and avoidance of the area by GSG.

It is the policy of BLM WY to manage GSG habitats consistent with the provisions set forth by the State of Wyoming, and as described in Instruction Memorandum (IM) No. WY-2012-019, Greater Sage-Grouse Habitat Management Policy on Wyoming Bureau of Land Management (BLM) Administered Public Lands Including the Federal Mineral Estate. IM 2012-019 states that for areas outside of core and connectivity habitats, "Surface disturbing and/or disruptive activities are prohibited from March 15–June 30 to protect sage-grouse nesting and early brood rearing habitats within 2 miles of the lek or lek perimeter of any occupied lek located outside core or connectivity areas." The PRB FEIS discussed direct and indirect impacts to GSG in more detail, pp. 4-257 to 4-273.

4.6.2.2. Cumulative Effects

In its *Recommendations for Development of Oil and Gas Resources within Important Wildlife Habitats* (2009), WGFD categorized levels of oil and gas development into thresholds that correspond to moderate, high, and extreme impacts to habitat effectiveness for various species of wildlife, based on well pad densities and acreages of disturbance. All 3 levels of impact result in a loss of habitat function by directly eliminating habitat; disrupting wildlife access to, or use of habitat; or causing avoidance and stress to wildlife. Impacts to GSG are categorized by number of well pad locations per square mile within 2 miles of a lek and within identified nesting/brood-rearing habitats greater than 2 miles from a lek. Moderate impacts occur when well density is between 1 and 2 well pad locations per square mile or where there is less than 20 acres of disturbance per square mile. High impacts occur when well density is between 2 and 3 well pad locations per square mile or when there are between 20 and 60 acres of disturbance per square mile. Extreme impacts occur when well density exceeds 3 well pad locations per square mile or when there are greater than 60 acres of disturbance per square mile. Extreme impacts mean those where the function of an important wildlife habitat is substantially impaired or lost.

Declines in lek attendance associated with oil and gas development may be a result of a suite of factors including avoidance (Holloran et al. 2005, Holloran et al. 2007, Aldridge and Boyce 2007, Walker et al. 2007, Doherty et al. 2008, WGFD 2009), loss and fragmentation of habitat (Connelly et al. 2000, Braun et al. 2002, Connelly et al. 2004, WGFD 2004a, Rowland et al. 2005, WGFD 2005, Naugle et al. in press), reductions in habitat quality (Braun et al. 2002, WGFD 2003, Connelly et al. 2004, Holloran et al. 2005) and changes in disease mechanisms (Naugle et al. 2004, WGFD 2004b, Walker et al. 2007, Cornish pers. comm.). The BFO Resource Management Plan (BLM 2001) and the PRB FEIS Record of Decision (BLM 2003) included a 2-mile timing limitation on surface-disturbing activities around GSG leks. The 2-mile measure originated with the Western Association of Fish and Wildlife Agencies (WAFWA) (BLM 2004). Wyoming BLM adopted the 2-mile recommendation in 1990 (BLM 1990). The 2-mile recommendation was based on early research which indicated between 59% and 87% of GSG nests were within 2 miles of a lek (BLM 2004). These studies occurred in vast contiguous stands of sagebrush, such as those that occur in Idaho's Snake River plain.

Additional research across more of the GSG's range indicated that nesting may occur much farther than 2 miles from the breeding lek (BLM 2004). Holloran and Anderson (2005), in their Upper Green River Basin study area, reported that only 45% of their GSG hens nested within 1.9 miles of the capture lek. Moynahan and Lindberg (2004) found that only 36% of their GSG hens nested within 1.9 miles of the capture lek. Habitat conditions, and, thus, GSG biology, in the BFO are more similar to Moynahan's north-central Montana study area than the Upper Green River area. Moynahan's study area occurred in mixed-grass prairie and sagebrush steppe, dominated by Wyoming big sagebrush (Moynahan et al. 2007).

Recent research in the PRB suggests that impacts to leks from energy development are discernible out to a minimum of 4 miles, and that some leks in this radius were extirpated as a direct result of energy development (Walker et al. 2007, Walker 2008, Naugle et al. *In press*). Based on these studies, the BLM determined that a 2-mile timing limitation is insufficient to reverse the population decline.

A timing limitation does nothing to mitigate loss and fragmentation of habitat and changes in disease mechanisms. Rather than limiting mitigation to only timing restrictions, more effective mitigation strategies may include, at a minimum, burying power lines (Connelly et al. 2000b); minimizing road and well pad construction, vehicle traffic, and industrial noise (Lyon and Anderson 2003, Holloran 2005); and managing produced water to prevent the spread of mosquitoes with the potential to vector West Nile Virus in GSG habitat (Walker et al 2007). Walker et al. (2007) recommend maintaining extensive stands of sagebrush habitat over large areas (at least one mile in size) around leks to ensure GSG persistence. The size of such a no-development buffer would depend on the amount of suitable habitat around the lek and the population impact deemed acceptable. Connelly et al. (2000) recommended locating all energy-related facilities at least 2 miles from active leks.

Several guidance documents are available that recommend practices that would reduce impacts of development on GSG. These include *Northeast Wyoming Sage-Grouse Conservation Plan* (Northeast Wyoming Sage-grouse Working Group 2006), *Sage-Grouse Habitat Management Guidelines for Wyoming* (Bohne et al. 2007), *Recommendations for Development of Oil and Gas Resources within Important Wildlife Habitats* (WGFD 2009), *Bureau of Land Management National Sage-Grouse Habitat Conservation Strategy* (USDI 2004), and *Greater Sage-Grouse Comprehensive Conservation Strategy* (Stiver et al. 2006).

The PRB FEIS (BLM 2003) states that "the synergistic effect of several impacts would likely result in a downward trend for the sage-grouse population, and may contribute to the array of cumulative effects that may lead to its federal listing. Local populations may be extirpated in areas of concentrated development, but viability across the Project Area [PRB] or the entire range of the species is not likely to be compromised (p. 4-270)."

4.6.2.3. Mitigation Effects

To protect nesting and brood rearing GSG, BLM will implement a timing limitation (1 March to 30 June) on all surface-disturbing activities associated with the proposed project.

4.6.2.4. Residual Effects

A timing limitation does nothing to mitigate loss and fragmentation of habitat or changes in disease mechanisms. Suitability of the project area for GSG will be negatively affected due to habitat loss and fragmentation and proximity of human activities associated with fluid mineral development.

4.6.3. Special Status (Sensitive) Species (SSS)

BLM supports the policies set forth in sensitive species policy (BLM Manual 6840). BLM Manual 6840.22A states that "The BLM should obtain and use the best available information deemed necessary to evaluate the status of special status species in areas affected by land use plans or other proposed actions and to develop sound conservation practices. Implementation-level planning should consider all site-specific methods and procedures which are needed to bring the species and their habitats to the condition under which the provisions of the ESA are not necessary, current listings under special status species categories are no longer necessary, and future listings under special status species categories would not be necessary." The PRB FEIS discusses impacts to sensitive species on pp. 4-257 to 4-265. BLM analyzed site specific effects to sensitive species below in Sections 4.8.2.2 (migratory birds).

4.7. Cultural Resources

4.7.1. Direct and Indirect Effects

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 be impacted by the proposed project. Following the State Protocol Between the Wyoming BLM State Director and The Wyoming State Historic Preservation Officer, Section VI(A)(1) the BLM notified the Wyoming State Historic Preservation Officer (SHPO) on November 12, 2013 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).

4.7.2. 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.

4.7.3. Mitigation Measures

If Operators observe any cultural values [sites, artifacts, human remains (Appendix L PRB FEIS and ROD)] during operation of this lease/permit/right-of-way, they will be left intact and the Buffalo Field Manager notified. Standard COA (General)(A)(1) further explains discovery procedures.

4.7.4. 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. CONSULTATION/COORDINATION:

BLM consulted or coordinated with the following on this project:

Contact	Organization	Onsite Presence?
Mary Hopkins	WY SHPO	No
Rev Morton	True Oil, LLC	Yes
Kallasandra Moran	JKC Engineering	Yes

List of Preparers (BFO unless otherwise noted)

Position/Organization	Name	Position/Organization	Name
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Appendix A. Table W. Summary of Sensitive Species Habitat and Project Effects Associated with Alternative B.

Common Name (scientific name)	Habitat	Presence	Project Effects	Rationale
Amphibians				
Northern leopard frog (*Rana pipiens*)	Beaver ponds and cattail marshes from plains to montane zones.	NS	NI	Habitat is not present.
Columbia spotted frog (*R*anus pretiosa)	Ponds, sloughs, small streams, and cattails in foothills and montane zones. Confined to headwaters of the S Tongue R drainage and tributaries.	NP	NI	The project area is outside the species' range, and the species is not expected to occur .
Fish				
Yellowstone cutthroat trout (*Oncoryhynchus clarki bouvieri*)	Cold-water rivers, creeks, beaver ponds, and large lakes in the Upper Tongue sub-watershed	NP	NI	The project area is outside the species' range, and the species is not expected to occur.
Birds				
Baird's sparrow (*Ammodramus bairdii*)	Shortgrass prairie and basin-prairie shrubland habitats; plowed and stubble fields; grazed pastures; dry lakebeds; and other sparse, bare, dry ground.	S	MIIH	Nesting and foraging habitat may be impacted by dust, noise, human activities, and direct loss. Species may avoid area.
Bald eagle (*Haliaeetus leucocephalus*)	Mature forest cover often within one mile of large water body with reliable prey source nearby.	NP	NI	Habitat is not present.
Brewer's sparrow (*Spizella breweri*)	Sagebrush shrubland	S	MIIH	Nesting and foraging habitat may be impacted by dust, noise, human activities, and direct loss. Species may avoid area.
Ferruginous hawk (*Buteo regalis*)	Basin-prairie shrub, grasslands, rock outcrops	NS	NI	No documented nests occur within 0.5 miles of the project area. Nesting and foraging habitat may be impacted by dust, noise, human activities, and direct loss. Species may avoid area.
Loggerhead shrike (*Lanius ludovicianus*)	Basin-prairie shrub, mountain-foothill shrub	S	MIIH	Nesting and foraging habitat may be impacted by dust, noise, human activities, and direct loss. Species may avoid area.
Long-billed curlew (*Numenius americanus*)	Grasslands, plains, foothills, wet meadows	NP	NI	Habitat is not present.

Common Name (scientific name)	Habitat	Presence	Project Effects	Rationale
Mountain Plover	Short-grass prairie with slopes < 5%	NS	NI	A small prairie dog town is located within 0.25 miles of the project. However, the town is inactive and vegetation height and topography in the area preclude use by plovers.
Northern goshawk (*Accipiter gentilis*)	Conifer and deciduous forests	NP	NI	Habitat not present.
Peregrine falcon (*Falco peregrinus*)	Cliffs	NP	NI	Habitat not present.
Sage sparrow (*Amphispiza billneata*)	Basin-prairie shrub, mountain-foothill shrub	S	MIIH	Nesting and foraging habitat may be impacted by dust, noise, human activities, and direct loss. Species may avoid area.
Sage thrasher (*Oreoscoptes montanus*)	Basin-prairie shrub, mountain-foothill shrub	S	MIIH	Nesting and foraging habitat may be impacted by dust, noise, human activities, and direct loss. Species may avoid area.
Trumpeter swan (*Cygnus buccinator*)	Lakes, ponds, rivers	NP	NI	Habitat not present.
Western Burrowing owl (*Athene cunicularia*)	Grasslands, basin-prairie shrub	NP	NI	Habitat is not present.
White-faced ibis (*Plegadis chihi*)	Marshes, wet meadows	NP	NI	Habitat not present.
Yellow-billed cuckoo (*Coccyzus americanus*)	Open woodlands, streamside willow and alder groves	NP	NI	Habitat not present.
Mammals				
Black-tailed prairie dog (*Cynomys ludovicianus*)	Prairie habitats with deep, firm soils and slopes less than 10 degrees.	NP	NI	Habitat is not present.
Fringed myotis (*Myotis thysanodes*)	Conifer forests, woodland chaparral, caves and mines	NP	NI	Habitat not present.
Long-eared myotis (*Myotis evotis*)	Conifer and deciduous forest, caves and mines	NP	NI	Habitat not present.
Swift fox (*Vulpes velox*)	Grasslands	NP	NI	Habitat is not present.
Townsend's big-eared bat (*Corynorhinus townsendii*)	Caves and mines.	NP	NI	Habitat not present.
Plants				

Common Name (scientific name)	Habitat	Presence	Project Effects	Rationale
Limber Pine (*Pinus flexilis*)	Mountains, associated with high elevation conifer species	NP	NI	Habitat not present.
Porter's sagebrush (*Artemisia porteri*)	Sparsely vegetated badlands of ashy or tufaceous mudstone and clay slopes 5300-6500 ft.	NP	NI	Habitat not present.
William's wafer parsnip (*Cymopterus williamsii*)	Open ridgetops and upper slopes with exposed limestone outcrops or rockslides, 6000-8300 ft.	NP	NI	Project area outside of species' range.

Presence

K - Known, documented observation within project area.
S - Habitat suitable and species suspected, to occur within the project area.
NS - Habitat suitable but species is not suspected to occur within the project area.
NP - Habitat not present and species unlikely to occur within the project area.

Project Effects

NI - No Impact.
MIIH - May Impact Individuals or Habitat, but will not likely contribute to a trend towards Federal listing or a loss of viability to the population or species.
WIPV - Will Impact Individuals or Habitat with a consequence that the action may contribute to a trend towards Federal listing or cause a loss of viability to the population or species.
BI -Beneficial Impact