

DECISION RECORD
Categorical Exclusion 3 (CX3), WY-070-390CX3-15-74 thru 83
Section 390, Energy Policy Act of 2005
Sheridan Production Co., LLC,
SLPU Geer Fed 1 POD
Bureau of Land Management, Buffalo Field Office, Wyoming

DECISION. The BLM approves the applications for permit to drill (APDs) from Sheridan Production Co., LLC, to drill 9 wells and construct their associated infrastructure as described in the CX3 analysis, WY-070-390CX3-15-74 thru -83 (exclusive of 83 which is deferred), all of which the BLM incorporates here by reference.

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 Oil and Gas Project Final Environmental Impact Statements (FEIS), 2003.
- Buffalo Resource Management Plan (RMP) 1985, Amendments 2001, 2003, 2011.
- Greater Sage-Grouse Habitat Management Policy on Wyoming BLM Administered Public Lands (WY-IM-2012-019) and Greater Sage-Grouse Interim Management Policies and Procedures (WO-IM-2012-043).

A summary of the details of the approval follows. The CX3 analysis, WY-070-390CX3-15-74 to -83, includes the project description, including site-specific mitigation measures, which are incorporated by reference into this CX3 from earlier analysis. The proposed wells are approximately 34 miles southwest of Gillette in Campbell County, Wyoming. The SLPU Geer Fed 1 POD proposal included 10 APDs to develop and produce oil and natural gas from the Parkman formation of the PRB. All wells are horizontal bores with 1 well per location.

Approvals. BLM approves the following 9 APDs and associated infrastructure:

#	Well Name	Well #	TWP	RNG	SEC	QTR	CX3 #
1	SLPU Geer Fed 1	14-03-2H	44N	74W	3	SWSW	WY-070-390CX3-15-74
2	SLPU Geer Fed 1	42-03H	44N	74W	3	SENE	WY-070-390CX3-15-75
3	SLPU Geer Fed 1	44-03H	44N	74W	3	SESE	WY-070-390CX3-15-76
4	SLPU Geer Fed 1	33-04H	44N	74W	4	SWSE	WY-070-390CX3-15-77
5	SLPU Geer Fed 1	22-09H	44N	74W	9	SENE	WY-070-390CX3-15-78
6	SLPU Geer Fed 1	33-09H	44N	74W	9	NWSE	WY-070-390CX3-15-79
7	SLPU Geer Fed 1	42-10H	44N	74W	10	SENE	WY-070-390CX3-15-80
8	SLPU Geer Fed 1	44-28H	45N	74W	28	SESE	WY-070-390CX3-15-81
9	SLPU Geer Fed 1	44-34H	45N	74W	34	SESE	WY-070-390CX3-15-82

Deferrals. BLM defers the decision on the following 1 APD for reasons listed below in Limitations.

#	Well Name	Well #	TWP	RNG	SEC	QTR	CX3 #
10	SLPU Geer Fed 1	42-18H	46N	74W	18	SENE	WY-070-390CX3-15-83

Limitations.

BLM defers its decision on SLPU Geer Fed 42-18H APD because the surface owner and Sheridan were unable to reach an adequate Surface Agreement as required by BLM's Instruction Memorandum No. 2009-078 IM 2009-078, entitled *Processing Oil and Gas Applications for Permit to Drill for Directional Drilling into Federal Mineral Estate from Multiple-Well Pads on Non-Federal Surface and Mineral Estate Locations*. IM 2009-078 states that the operator must provide the BLM a true and complete copy of a document in which the owner of the surface or that owner's representative authorizes the operator to drill a Federal well from the non-Federal lands, and in which the surface owner or representative guarantees the Department of the Interior (Department), including BLM, access to the non-Federal lands to perform all necessary surveys and inspections. The Operator has two years to provide the BLM with an adequate Surface Agreement as required in IM 2009-078 and Onshore Order #1. If an adequate Surface Agreement for SLPU Geer Fed 42-18H is not provided to the BLM within 2 years, the well will be denied.

THE FINDING OF NO SIGNIFICANT IMPACT (FONSI). Congress, the Department of Interior and BLM affirmed there was no significant impact of a like-structured project when they created this CX3 and its limiting parameters. Thus a FONSI and an EIS is not required.

COMMENT OR NEW INFORMATION SUMMARY. There has been no new information or policies received since BLM's receipt of these APDs.

DECISION RATIONALE. The approval of this project is because:

1. BLM and Sheridan included design features and mitigation measures (conditions of approval (COAs)) to reduce environmental impacts while meeting the BLM's need. For a complete description of all site-specific COAs, see the COAs.
 - 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 (WO-IM-2012-043) and Wyoming (WY-IM-2012-019) GSG conservation strategies.
 - b. With application of Standard Operating Procedures (SOPs), applied mitigation, Required Design Features, and COAs identified for Greater Sage-Grouse under the [proposed action], impacts caused by surface-disturbing and disruptive activities would be minimized.
 - c. There are no conflicts anticipated or demonstrated with current uses in the area.
2. The Resource Management Plan (RMP) for the Buffalo Field Office is currently undergoing revision. The Draft RMP and Environmental Impact Statement was released in June 2013. The proposed action was screened against the Draft RMP to ensure that the proposed action would not preclude BLM's ability to select any alternative in a ROD. The proposed action was also determined to not be inconsistent with the direction outlined in the RMP's Preferred Alternative.
3. Sheridan will conduct operations to minimize adverse effects to surface and subsurface resources prevent unnecessary surface disturbance, and conform with currently available technology and practice.
4. Approval of APDs will help meet the nation's energy needs, and help stimulate local economies by maintaining workforce stability.
5. 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.

6. The operator certified it has surface access agreements exclusive of SLPU Geer Fed 42-18H. The deferral of SLPU Geer Fed 42-18H CX 390 and its infrastructure allows Sheridan additional time to submit an adequate Surface Agreement to the BLM. In addition to the deferral language, justification, and remedy provided above, the deferral is proper under the standard lease terms, the rationale in the Buffalo RMP, and Wyoming BLM policy.
7. The project lacks wilderness characteristics. A wilderness characteristics inventory was completed in 2013; no lands with wilderness characteristics were identified outside the Big Horn Mountains. The inventory is available at: <http://www.blm.gov/wy/st/en/programs/Planning/rmps/buffalo/docs.html>.

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: 4/28/2015

Categorical Exclusion 3 (CX3), WY-070-390CX3-15-74 thru 83
Section 390, Energy Policy Act of 2005
Sheridan Production Co., LLC, SLPU Geer Fed 1 POD,
Applications for Permit to Drill (APDs)
Bureau of Land Management, Buffalo Field Office, Wyoming

Description of the Proposed Action.

Sheridan Production Co., LLC (Sheridan) requests BLM’s approval for 10 applications for permit to drill (APDs). Sheridan proposes to drill 10 horizontal oil and gas wells from 10 well pad locations and construct associated infrastructure at the locations in Table 1.1.

Table 1.1. Proposed Wells

#	Well Name	Well #	TWP	RNG	Sec	QTR	Surface Ownership	Surface Lease	Lateral/Bottom Hole Lease
1	SLPU Geer Fed 1	14-03-2H	44N	74W	3	SWSW	Fee	Federal	Mixed
2	SLPU Geer Fed 1	42-03H	44N	74W	3	SENE	Fee	Federal	Federal
3	SLPU Geer Fed 1	44-03H	44N	74W	3	SESE	Fee	Federal	Federal
4	SLPU Geer Fed 1	33-04H	44N	74W	4	SWSE	Fee	Fee*	Federal
5	SLPU Geer Fed 1	22-09H	44N	74W	9	SENE	Fee	Federal	Federal
6	SLPU Geer Fed 1	33-09H	44N	74W	9	NWSE	Fee	Federal	Mixed
7	SLPU Geer Fed 1	42-10H	44N	74W	10	SENE	Fee	Federal	Mixed
8	SLPU Geer Fed 1	44-28H	45N	74W	28	SESE	Fee	Fee*	Mixed
9	SLPU Geer Fed 1	44-34H	45N	74W	34	SESE	Fee	Fee*	Mixed
10	SLPU Geer Fed 1	42-18H	46N	74W	18	SENE	Fee	Fee*	Federal

*Under jurisdiction of IM-2009-078: Fee surface over Fee Mineral producing from Federal Mineral estate

The proposal is to explore for, and possibly develop oil and gas reserves in the Lower Parkman formation at an average depth of 7,725 feet total vertical depth. The laterals are various lengths and directions; see APDs for specifics. The project area is 34 miles south of Gillette, Campbell County, Wyoming.

The jurisdiction for 14-03-2H, 42-03H, 44-03H, 22-09H, 33-09H, and 42-10H is fee surface with underlying Federal minerals; the laterals producing from a mix of fee and Federal minerals. The jurisdiction 33-04H, 44-28H, 44-34H, and 42-18H is fee surface with underlying fee minerals; the lateral producing from Federal minerals. BLM consults Instruction Memorandum (IM) No. 2009-078 entitled *Processing Oil and Gas Applications for Permit to Drill for Directional Drilling into Federal Mineral Estate from Multiple-Well Pads on Non-Federal Surface and Mineral Estate Locations* for processing applied to the 33-04H, 44-28H, 44-34H, and 42-18H APDs. Appendix B contains required Conditions of

Approval (COAs), and Appendix C contains Recommended Conditions of Approval (COAs), for these wells as instructed in IM No. 2009-078. The fluid mineral leasing program falls under the authority of the Mineral Leasing Act, the Federal Land Policy Management Act (FLPMA), and other laws and regulations.

Table 1.2 Environmental Documents

#	Well Name	Well #	TWP	RNG	SEC	QTR	CX3 #
1	SLPU Geer Fed 1	14-03-2H	44N	74W	3	SWSW	WY-070-390CX3-15-74
2	SLPU Geer Fed 1	42-03H	44N	74W	3	SENE	WY-070-390CX3-15-75
3	SLPU Geer Fed 1	44-03H	44N	74W	3	SESE	WY-070-390CX3-15-76
4	SLPU Geer Fed 1	33-04H	44N	74W	4	SWSE	WY-070-390CX3-15-77
5	SLPU Geer Fed 1	22-09H	44N	74W	9	SENE	WY-070-390CX3-15-78
6	SLPU Geer Fed 1	33-09H	44N	74W	9	NWSE	WY-070-390CX3-15-79
7	SLPU Geer Fed 1	42-10H	44N	74W	10	SENE	WY-070-390CX3-15-80
8	SLPU Geer Fed 1	44-28H	45N	74W	28	SESE	WY-070-390CX3-15-81
9	SLPU Geer Fed 1	44-34H	45N	74W	34	SESE	WY-070-390CX3-15-82
10	SLPU Geer Fed 1	42-18H	46N	74W	18	SENE	WY-070-390CX3-15-83

Project area elevation averages 4,989 feet above sea level. The area consists of flat to gentle rolling topography with small ephemeral drainages. The climate is semi-arid, averaging 10-14 inches of precipitation annually, about 60% of which occurs between April and September. The SLPU Geer Fed 1 POD wells and infrastructure are all located on private surface. Livestock grazing is the primary historic land use. There is existing conventional oil and coalbed natural gas (CBNG) development in and adjacent to the project area. Oil and gas development became the predominant land use in recent years. The proposed wells are in the Savageton Lower Parkman Oil & Gas Unit WYW177255X, which includes 28,330 acres of existing and proposed oil and gas development. A network of existing roads within the project area will be used to access wells in the SLPU Geer Fed 1 POD. These roads were constructed or improved to accommodate the existing CBNG and Oil & Gas development. Surface owners within the SLPU Geer Fed 1 POD include Robert Geer Trust, James A. Hall, Scott Collinsworth and Helen Jones, Darel Geer Trusts, and Gilbertz LLC.

Sheridan and BFO completed onsite evaluations on October 28 & 29, 2014, on Notices of Staking (NOSs) received on August 28 and September 16, 2014. The onsites evaluated the proposal and modified it to mitigate environmental impacts. Sheridan submitted APDs on January 12, 2015, to the BFO. The BLM sent a Post-onsite deficiency letter to Sheridan on February 24, 2015. Revisions were received from Sheridan Production on April 6, 2015.

Drilling, Construction & Production design features include:

Access Roads and Utilities

- A road network will consist of existing improved all-weather roads; proposed improved template roads, and proposed crown and ditch template roads. Sheridan will upgrade or construct 2.66 miles of roads to service SLPU Geer Fed 1 POD wells as shown in Table 1.4.
- Refer to the SUP for a detailed description of the access roads and utilities.
- Flowlines installed from proposed well locations to existing centralized tank batteries located on existing oil well pads within the unit.
- Existing overhead power is in vicinity of the proposed wells. A third party operator such as PreCorp will install approximately 1.52 miles of overhead power.
- A wheel trencher will be used to construct the pipeline right-of-way.
- Average Daily Traffic (ADT) per well as follows:

Activity	Duration	Heavy Duty Trucks ¹	Light Duty Trucks ²
Rig Move	5 days per well	30	15
Drilling & Completion	2-4 weeks per well	15	10
Production	Completion to Abandonment	0-1 ³	1

¹Heavy duty trucks include water haulers, cement trucks, drilling rigs; oil tankers during production.

²Personal pickup trucks

³Once flowlines are installed and operational, tankers will collect oil at centralized tank batteries.

Well Location

- Ten (10) engineered well pads with cuts and fills constructed with a 1½:1 slopes initially. The backslope will be reduced to 2:1 and the foreslope to 3:1 during interim reclamation. Long term and short-term disturbance listed in Table 1.4.
- Ten engineered well pads accounting for 35.14 acres of disturbance during construction and drilling; reduced to 7.24 acres of disturbance during production (after interim reclamation).
- A lined cuttings pit to hold drill cuttings generated from closed loop drilling.
- A lined oil-based mud (OBM) pit to store OBM used to drill the lateral portion of the wellbore.
- A lined reserve pit to store fresh water for drilling.
- Production facilities at each well site include a pumping unit, separator, treater and meter house, (1) 400 bbls water tank, (1) 400 bbls oil tank. After completion of flowlines, oil tankers will not visit locations; oil will be collected at centralized tank batteries.
- Centralized existing tank batteries
- See SUPO for a detailed description of design features.

Drilling and Completion Operations

- Approximately 10,000 bbls of water will be used for the drilling and completion of each SLPV Geer Fed 1 POD well. The water source will be municipal water from the city of Gillette, which will be hauled by truck to the well sites and stored in tanks
- Sheridan will not use Hydraulic Fracturing in completion of these wells.
- Drilling procedures for these wells employ closed-loop drilling. The vertical and lateral portions of the wellbore will be drilled with water-based and oil-based mud.
- A third party service company approved by the Wyoming Oil and Gas Conservation Commission (WOGCC) will be contracted to manage, treat, and dispose of all drilling related wastes associated with wells in the SLPV Geer Fed 1 POD.
- Sheridan certified that all affected landowners within ½ mile have been offered a water well agreement.

Table 1.3. Anticipated Drilling and Completion Sequence and Timing

Drilling and Completion Step	Approximate Duration
Build location (roads, pad, and other initial infrastructure)	30 days
Mobilize rig	2-5 days
Drilling (24/7)	30 days
Completion (Schedule, setup, completion, demobilization)	30 days

For a detailed description of design features and construction practices associated with this proposal, refer to the surface use plan (SUP) and drilling plan included with the APDs. Also, see the subject APDs for maps showing the proposed well locations and associated facilities described above. Total surface disturbance for the proposed action is 80.61 acres, reduced to 34.83 acres during production (Interim Reclamation) as shown in Table 1.4.

Table 1.4. Disturbance Summary SLPU Geer Fed 1 POD

Facility	Construction Disturbance (Short Term)	Interim Disturbance (Long Term)
Number of Well Pads	10	10
Engineered Pads with fill slopes, topsoil, spoils	35.14 acres	7.24 acres
Upgrade Existing Template Roads	3.88 acres	16.15 acres
Upgrade Existing Primitive Roads	11.91 acres	1.30 acres
Proposed Template Roads	6.86 acres	6.91 acres
Proposed Turnouts	0.46 acres	0.46 acres
Proposed Pipelines	19.59 acres	0 acres
Proposed Overhead Power	2.77 acres	2.77 acres
Total Acre Disturbance	80.61 Acres	34.83 Acres

Plan Conformance, Compliance, and Justification with the Energy Policy Act of 2005.

The Energy Policy Act of 2005, Section 390(a) subjects oil or gas exploration or development to a rebuttable presumption that the use of a categorical exclusion under the National Environmental Policy Act (NEPA) applies. Thus BLM must use an Energy Policy Act, Section 390(b), CX unless BLM rebuts the presumption. This CX analysis is NEPA compliance that is categorically excluded from an EA or EIS or their analysis; it is not an exclusion from all analysis. (40 CFR 1508.4 and BLM H-1790, p. 17.) The proposal conforms with the terms and conditions of the approved Resource Management Plan (RMP) for the public lands administered by the BLM, BFO, 1985, and Amendments of 2001, 2003, 2011, and the PRB FEIS, 2003 Record of Decision (ROD) as required by 43 CFR 1610.5, 40 CFR 1508.4, and 43 CFR 46.215. BLM finds that the conditions and environmental effects found in the senior EAs and PRB FEIS remain valid. The applicable categorical exclusion from the Energy Policy Act of 2005, Section 390, is exclusion number (b)(3) which is *drilling an oil or gas well within a developed field for which an approved land use plan or any environmental document prepared pursuant to NEPA analyzed such drilling as a reasonably foreseeable activity, so long as such plan or document was approved within 5 years prior to the date of spudding the well.*

BLM has 3 requirements to use a Section 390 CX3, (BLM H-1790, Appendix 2, #3, p. 143):

- 1) The proposed APD is in a developed oil or gas field (any field with a completed confirmation well). The proposed wells are in the Savageton Lower Parkman Oil & Gas Unit WYW177255X, which includes 28,330 acres of existing and proposed oil and gas development.

The proposed SLPU Geer Fed 1 POD is inside, immediately adjacent to or in the 4 mile analysis area of the recent NEPA analysis in Table 1.5, which include an area of approximately 19,840 acres. This information shows the reader that BLM conducted an analysis.

Table 1.5.* Overlapping NEPA Analyses Tiered & Incorporated by Reference

POD / Well Name	Operator	NEPA Analyses #	#/Type Well	# Drilled	Decision Date
SLPU Add 2 POD	Sheridan Production	WY-070-EA14-216	4/ Oil	3 Oil	6/25/2014
SLPU Phase 2 POD	Sheridan Production	WY-070-EA15-70	6/Oil	1 Oil	3/24/2015

See also: SDR WY-2013-005, particularly noting pp. 2-3, incorporating the entirety here by reference.

*Approved within 5 years and in the 4 miles analysis area of the SLPU Geer Fed 1 POD (as of 4/7/2015).

- 2) The tiered NEPA documents were finalized within 5 years of spudding (drilling) the proposed well. The SLPU Geer Fed 1 POD CX3 tiers to the NEPA analysis listed in Table 1.3.

In summary, the analyses in Tables 1.3., analyzed in detail the anticipated direct, indirect, residual, and cumulative effects that would result from the approval of these APDs and associated support structure in

SLPU Geer Fed 1 POD is similar to both the qualitative and quantitative analyses in the above tiered-to and incorporated NEPA analyses. The BLM reviewed the analyses and found that the analyses considered potential environmental effects associated with the proposal at a site specific level. The SLP Geer Fed 1 POD APD's surface use and drilling plans are incorporated here by reference and show adequate protection of surface lands and ground water, including the Fox Hills Formation. The proposal's acres of surface disturbances are within the analysis parameters of the PRB FEIS.

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 CX3 analysis also incorporates and analyzes the implementation of committed mitigation measures contained in the SUP, drilling plan, in addition to the Standard COAs found in the PRB FEIS ROD, Appendices A, B and C.

Traffic, light and heavy-duty trucks will increase with approval of the wells. During the construction and drilling phase, Sheridan estimates 5-15 heavy duty and light duty trucks per day. During the operation phase, Sheridan estimates one light duty truck per day for well operational activities.

Wildlife

A BLM wildlife biologist reviewed the proposed APDs and determined that they, combined with the COAs and design features, are: (1) consistent with the PRB FEIS, the Buffalo RMP and the above tiered NEPA analyses; and (2) consistent with the programmatic biological opinion (ES-6-WY-07-F012), from the PRB FEIS. 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)). Additional information is discussed below.

Land uses and other disturbances occurring within the proposed project include wildlife habitat, livestock grazing, ranching, dryland agriculture, overhead power lines, conventional oil and gas, and improved and unimproved roads. 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 affected environment for this proposal (all ten wells mentioned in Table 1.2) is similar to a recent approved project (Sahara POD) BLM analyzed. Therefore, the Sahara POD EA, WY-070-EA13-72 analysis is incorporated here by reference:

- Affected Environment (Section 3.7.2.1, p.15-17). Effects (Direct and indirect, Cumulative, Mitigation, and Residual, Section 4.6.2.1-4.6.2.2.1, pp. 28-32) to raptors and migratory birds from surface disturbing and disruptive activities associated with development of horizontal oil wells,

Raptors

There are eight ground nests in remnant condition within the POD area. The proposed SLP Geer Fed 1 14-03-2H, SLP Geer Fed 1 42-03H, SLP Geer Fed 1 44-03H, SLP Geer Fed 1 22-09H, SLP Geer Fed 1 33-09H, and SLP Geer Fed 1 42-10H well pads and access roads are within 0.5 mile of the eight nests within the POD. Human presence on the well pads will not be seen from the nests (due to topography). To reduce the risk of decreased productivity or nest failure during breeding and nesting season, BFO will apply a timing limitation (February 1 – July 31) within 0.5 mile of an active nest as a COA for surface disturbing activities (construction of well pad, associated buried pipelines, and for the associated access road). In addition to the federal development, there will be fee development associated

with the project that will have similar impacts on raptors as those discussed in the PRB FEIS. Even without federal development, the extent of fee development alone may surpass a threshold that makes the area unsuitable for raptors through avoidance and degradation of habitat quality.

Migratory birds

Suitable habitat for migratory birds is present throughout the proposal area. The BLM will apply a timing restriction limitation (May 1 – July 31) as a COA for surface disturbing activities (construction of well pad, associated buried pipelines, and the associated access road) for the proposed SLPU Geer Fed 1 14-03-2H, SLPU Geer Fed 1 42-03H, SLPU Geer Fed 1 44-03H, SLPU Geer Fed 1 22-09H, SLPU Geer Fed 1 33-09H, and SLPU Geer Fed 1 42-10H well. This restriction will 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 follow the “2012 Sage-brush BLM Sensitive Migratory Bird Nest Protocol” found at the following web address:

http://www.blm.gov/wy/st/en/field_offices/Buffalo/wildlife.html

BLM’s Instruction Memorandum No. 2009-078 entitled Processing Oil and Gas Applications for Permit to Drill for Directional Drilling into Federal Mineral Estate from Multiple-Well Pads on Non-Federal Surface and Mineral Estate Locations will apply to the proposed SLPU Geer Fed 1 33-04H, SLPU Geer Fed 1 44-28H, SLPU Geer Fed 1 44-34H, and SLPU Geer Fed 1 42-18H wells (COA’s are only recommended).

Raptors

The proposed SLPU Geer Fed 1 44-34 well and access road is within 0.5 mile from two of the eight nests within the POD. Human presence on the well pads will not be seen from the nests (due to topography). To reduce the risk of decreased productivity or nest failure during breeding and nesting season, BFO would typically implement a timing limitation (February 1 – July 31) within 0.5 mile of an active nest as a COA for surface disturbing activities (construction of well pad, associated buried pipelines, and for the associated access road). However, due to the BLM’s minimal surface jurisdiction (per BLM IM No. 2009-078) this timing limitation COA will only be recommended by the BLM in order to reduce the possibility that a violation or “take” may occur as defined by the Migratory Bird Treaty Act (MBTA).

Migratory Birds

During the onsite, the BLM biologist identified suitable nesting habitat present for several BLM sensitive sagebrush obligates. Construction of the SLPU Geer Fed 1 33-04H, SLPU Geer Fed 1 44-28H, SLPU Geer Fed 1 44-34H, and SLPU Geer Fed 1 42-18H well pads 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. To reduce the likelihood of a “take” under the MBTA, the BLM biologist recommended that pad construction (vegetation removal) occur outside of the breeding season (May 1-July 31). This recommended restriction will 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 follow the “2012 Sage-brush BLM Sensitive Migratory Bird Nest Protocol” found at the following web address:

http://www.blm.gov/wy/st/en/field_offices/Buffalo/wildlife.html

Soils/ Vegetation

Impacts anticipated occurring and mitigation considered with the implementation of the proposals will be similar to those analyzed in the Table 1.5, which are adjacent or overlapping to these proposals, are substantially similar, and are incorporated here by reference.

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 1/2 mile of the proposed wells in the

project area with depths ranging from 120 to 198 feet. For additional information on groundwater, refer to the PRB FEIS, 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 zone. This will ensure that ground water will not be adversely impacted by well drilling and completion. The operator will run surface casing to 1,700 feet, total vertical depth to protect shallow aquifers.

Table 1.4. Casing Set and Cementing Depths in relation to the Fox Hills

#	Well Name	Well #	Total Depth of Surface Casing (ft.)	Total Depth of Intermediate Casing (ft.)	Depth to Fox Hills (ft.)
1	SLPU Geer Fed 1	14-03-2H	1,700	7,139	6,452
2	SLPU Geer Fed 1	42-03H	1,700	7,062	6,375
3	SLPU Geer Fed 1	44-03H	1,700	7,119	6,429
4	SLPU Geer Fed 1	33-04H	1,700	7,172	6,489
5	SLPU Geer Fed 1	22-09H	1,700	7,231	6,552
6	SLPU Geer Fed 1	33-09H	1,700	7,233	6,553
7	SLPU Geer Fed 1	42-10H	1,700	7,209	6,503
8	SLPU Geer Fed 1	44-28H	1,700	7,090	6,400
9	SLPU Geer Fed 1	44-34H	1,700	7,021	6,330
10	SLPU Geer Fed 1	42-18H	1,700	6,965	6,415

The Fox Hills, the deepest penetrated fresh water zone in the PRB lies well above the target formation. Table 1.4., shows the depth where casing will be set and cemented in place. The operator will verify that there is competent cement across the zone, from 100 feet above to 100 feet below the Fox Hills formation. This will ensure that groundwater will not be adversely impacted by well drilling and completion operations.

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 well 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.

Cultural

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). A Class III (intensive) cultural resource inventory (BFO project no. 70150001) was performed in order to locate specific historic properties which may be impacted by the proposed project. The following resources are located in or near the proposed project area.

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Reference

Taylor, R. L., D. E. Naugle, L. S. Mills. 2012. Viability analyses for conservation of sage-grouse populations: Buffalo Field Office, Wyoming. Final Report. February 27, 2012. University of Montana, Missoula, MT.