FINDING OF NO SIGNIFICANT IMPACT & DECISION RECORD
FOR
True Oil LLC
Gleason 41-15
ENVIRONMENTAL ASSESSMENT –WY-070-EA09-90

DECISION: Is to approve as described in the attached Environmental Assessment (EA) and authorize True Oil's Gleason 41-15 well comprised of a single Application for Permit to Drill (APD):

WELL NAME/#/LEASE/LOCATION:

Well Name & Number	QTR	Sec.	T	R	Lease #
Gleason 41-15	NENE	15	54N	70W	WYW-138116

This approval is subject to adherence with all of the operating plans and mitigation measures contained in the Master Surface Use Plan of Operations, Drilling Plan, and information in individual APDs. This approval is also subject to operator compliance with all mitigation and monitoring requirements contained within the Powder River Oil and Gas Project Environmental Impact Statement and Resource Management Plan Amendment (PRB FEIS) approved April 30, 2003.

RATIONALE: The decision to authorize as described in the attached Environmental Assessment (EA), is based on the following:

1. The Operator, in their proposed action has committed to:
    - Comply with all applicable Federal, State and Local laws and regulations.
    - Obtain the necessary permits from other agencies for the drilling, completion and production of these wells including water rights appropriations, the installation of water management facilities, water discharge permits, and relevant air quality permits.
    - Consolidate activities using existing roads and infrastructure.
    - Use flow lines to bring product to a central facility to reduce traffic and minimize perch sites for predators.
    - Technologies will be used that would reduce total surface disturbance within occupied sage-grouse habitat such as reinjection of produced water (injection water wells as opposed to reservoir containment).
    - Noise will be limited from industrial development or traffic to 10dBA above natural, ambient noise (~39 dBA) measured at the perimeter of the nearest Sage-grouse lek.
    - Limit construction and development to the period between July 1 and March 14 (outside the Greater sage-grouse nesting season).
    - Utility corridors and flow lines will be co-located parallel and adjacent to existing access roads where feasible; previous disturbance corridors will be utilized where practical.
    - Employ 30 day site-stabilization and erosion mitigation techniques such as silt fencing, water bars, matting, erosion logs, rip-rap, to ensure re-vegetation, reduce topsoil loss, and minimize growth of noxious and invasive weeds.
    - Implement strategies to assist in prevention of the spread of noxious weeds or invasive plants detrimental to sage-grouse.
    - Power will be buried to avoid areas of high avian use (for example, wetlands, prairie dog towns, and grouse leks), and increasing the visibility of the individual conductors.
    - No overhead power lines will constructed in the core sage-grouse population area.
    - If the wells are put on production, daily routine pumper visits for up to 60 days will be limited to daylight hours between 9:00 AM to 4:00 PM from March 15 and June 30 except in an emergency situation.

- During the process of evaluating True Oil's proposal the BLM coordinated with the Wyoming Game and Fish to ensure that the project mitigation met the intent of Wyoming's core area strategy. Coordination will continue with the Wyoming Game and Fish to assess the effectiveness of the mitigation measures (Letter to file Wyoming Game and Fish 9/25/2009)

2. Disturbance to sage grouse will be minimal as the proposed actions are either in, or within close proximity to conifer woodland.
3. The Operator has certified that a Surface Use Agreement has been reached with the Landowners.
4. The proposed action will not result in any undue or unnecessary environmental degradation.
5. It is in the public interest to approve this development to help meet the nation's future needs for energy reserves. It also helps to stimulate local economies by maintaining stability for the workforce.
6. Mitigation measures applied by the BLM will lessen environmental impacts.
7. Approval of this alternative is in conformance with the PRB FEIS and the Approved Resource Management Plan for the Public Lands Administered by the Bureau of Land Management (BLM), Buffalo Field Office, April 2001.
8. The proposed action incorporates appropriate local sage-grouse research and the best available science from across the species' range in development of Conditions of Approval attached.

FINDING OF NO SIGNIFICANT IMPACT: Based on the analysis of the potential environmental impacts, I have determined that NO significant impacts are expected from the implementation of the proposed action and, therefore, an environmental impact statement is not required.
In conformance with Appendix E, *Record of Decision, Powder River Oil and Gas Project Environmental Impact Statement and Resource Management Plan Amendment* (PRB FEIS), BLM Buffalo Field Office has initiated management actions within the PRB FEIS analysis area in response to additional information regarding impacts to sage-grouse. These measures include:

1. Early initiation of a Land Use Plan (LUP) revision, based upon the evaluation of monitoring data generated under the "Mitigation Monitoring and Reporting Plan (MMRP)" in the PRB FEIS Record of Decision
2. Establishment of sage-grouse "focus" areas, encompassing approximately 1 million acres of sage-grouse habitat. These areas are managed under strict guidelines designed to preserve sage-grouse habitat for development of Alternatives during the LUP process (Appendix 1).
3. Initiation of a Population Viability Analysis in the Powder River Basin. This is a 24 month project involving the USGS, BLM Miles City Field Office, BLM Buffalo Field Office and the University of Montana.
4. Development of Alternatives that modify the Proposed Action to reflect the best available science in sage-grouse management.
5. Development of Conditions of Approval, specific to sage-grouse management, that incorporate recommendations from recent research, the NE Local Sage-grouse Working Group, and the Petroleum Association of Wyoming.

The implementation meets the stated Purpose and Need for the Proposed Action. With the application of mitigation measures in the preferred alternative, sage-grouse population viability in the project area will not be compromised due to the larger scope of planning actions and research initiated by the BLM, Buffalo Field Office.

ADMINISTRATIVE REVIEW AND APPEAL: Under BLM regulations, this decision is subject to administrative review in accordance with 43 CFR 3165. Any 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.

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: _____ Date: 9/30/09

BUREAU OF LAND MANAGEMENT
BUFFALO FIELD OFFICE
ENVIRONMENTAL ASSESSMENT
EA # WY-070-09-90

PROJECT NAME: Gleason 41-15
OPERATOR/APPLICANT: True Oil LLC.

Well Name/#/Location/Lease:

Well Name & Number	QTR	Sec.	T	R	Lease #
Gleason 41-15	NENE	15	54N	70W	WYW-138116

AFFECTED SURFACE OWNERS: Gail Gleason, 452 Heald Rd., Weston, WY 82731-8814

COUNTY: Campbell

LAND USE PLAN CONFORMANCE:
This proposed action is in conformance with the terms and conditions of the Approved Resource Management Plan for the Public Lands Administered by the Bureau of Land Management, Buffalo Field Office, April 2001 and the Powder River Oil and Gas Project EIS and Resource Management Plan Amendment (PRB FEIS) approved April 30, 2003**.** This proposed action falls inside the BLM designated Sage Grouse Focus Area and Wyoming Game & Fish Department Sage Grouse Core Population Area and is in conformance with guidance issued August 13, 2008, by the BLM Buffalo Field Office (*Guidance for general management actions during BFO Resource Management Plan Revision).* These additional management actions were designed in accordance with the 2003 Record of Decision which states, in part, "Land use plan monitoring will be conducted by BLM…Information gathered from this monitoring will guide mid-course corrections in adapting to the inevitable changes that will occur because of new information."

NEED FOR THE PROPOSED ACTION:
The actions as described in the above-referenced Application for Permit to Drill (APD) are needed to further develop oil and gas reserves in the United States. The APD was submitted by private industry for development of oil/gas on a valid federal oil and gas lease.

Information contained in the APD is considered an integral part of this environmental assessment and is, therefore, incorporated by reference (CFR 1502.21).

Development of the Gleason 41-15 wells would return royalties to the Federal Treasury as well as stimulate local economies.

The BLM recognizes the extraction of natural gas is essential to meeting the nation's future needs for energy. As a result, private exploration and development of federal gas reserves are integral to the agencies' oil and gas leasing programs under the authority of the Mineral Leasing Act of 1920, as amended, and the Federal Land Policy Management Act (FLPMA) of 1976. The oil and gas leasing program managed by BLM encourages the development of domestic oil and gas reserves and reduction of the U.S. dependence on foreign sources of energy.

This action responds to the goals and objectives outlined in the Resource Management Plan for the Public Lands Administered by the Bureau of Land Management (BLM), Buffalo Field Office, April 2001 and the Powder River Oil and Gas Project Environmental Impact Statement and Resource Management Plan Amendment (PRB FEIS) approved April 30, 2003. This action helps move the project area towards

desired conditions for mineral development with appropriate mitigation consistent with the goals, objectives and decisions outlined in these two documents.

Information contained in the APD is considered an integral part of this environmental assessment and is, therefore, incorporated by reference (CFR 1502.21).

DESCRIPTION OF THE PROPOSED ACTION & ALTERNATIVES

No Action

A No Action Alternative was considered in the PRB FEIS, Volume 1, pages 2-54 through 2-62. This alternative would consist of no new federal wells. An oil and gas lease grants the lessee the "right and privilege to drill for, mine, extract, remove, and dispose of all oil and gas deposits" in the lease lands, "subject to the terms and conditions incorporated in the lease." Thus, under this alternative, the operator's proposal would be denied.

Proposed Action

The proposed action is to drill and develop one conventional oil well and related infrastructure. The proposed location resides in Campbell County approximately 26.2 miles north of Gillette on highway 59 to Weston, WY. From Weston, WY the location lies to the east on the Heald County Road (County Road #49) approximately 6.65 miles within True Oil's developed Soda Field. The project is located within sections 10 and 15, T.54N R.70W and encompasses a total area of approximately 4.3 acres. The proposed locations, target formation and total depth are in Table 1 below as follows:

Table 1 Well Legal Location and Target Formation

Well Name & Number	QTR	Sec	T.	R.	Target Formation & Total Depth
Gleason Federal # 41-15	NE/NE	15	54	70	Muddy-5672' Feet

The proposed action falls inside the designated Sage Grouse Core Focus Area where BLM's stated objective is to maintain a viable population of sage grouse and to maintain habitat connectivity by addressing habitat loss, degradation, and fragmentation, while conserving any sage-grouse habitat affected by the proposal. The BLM, in accordance with 40 CFR, 1506.1, is required to refrain from actions that would limit the choices of reasonable alternatives in the preparation of an EIS. The pace of oil and gas development in areas of high quality sage-grouse habitat in the Powder River Basin is likely to compromise alternatives to be considered (e.g. phased development, deferred development, more restrictive mitigation measures) in light of the current science and information about this population and its relation to oil and gas development.

Project History:

The proposed Gleason 41-15 project resides in the Soda Wells East Field, discovered in early 1964. This field produces from the Muddy formation in the Powder River Basin. The field is located in sections 10-12, 13-15, and 22-24 of Township 54 North Range 70 West. The discovery well was the Govt. 1-11 well located in the SE SW of sec. 11 T.54N R.70W. The well had initial production of 85 barrels of oil per day and 35 barrels of water. The operator of this well was the Tipps Drilling Company. According to the Wyoming Oil and Gas Conservation Commission the production in the field since 1978 has been 1,246,197 bbls of oil, and 3,627 MCF gas.

The field was developed from 1964 thru 1966 with the drilling of 13 development wells after the initial discovery. There was a second phase of development during 1984 with the drilling of 3 wells. There were 10 dry holes drilled from 1962 thru 1996. There have been many operators who have drilled all of these wells. They include: Tipps Drilling Company, Farmers Union Central, Eason Oil Company, HLM Drilling, Murphy Oil, True Oil Company, Citation Oil and Gas, Western Production Company, Diamond Shamrock Corporation, Samedan Oil Corporation, Thomas Production Company, Reserve Oil and Gas Company, Lario Oil and Gas Company, Texas Pacific Oil Company, Davis Oil Company, and Mohawk Petroleum Company.

There are currently two producing wells and one well that is a water injector. The Federal 1-14 well located in the SE NW of sec. 14 54N 70W is on production, and is operated by Chaco Energy Company. The Gleason State 22-15 located in the SE NW of sec. 15 54N 70W is on production, and is operated by True Oil LLC. The Gleason State 24-10 located in the SESW of sec. 10 54N 70W is injecting water into the Muddy, and is operated by True Oil LLC.

There are overhead power lines that are providing power to the existing active wells. This power would be available to connect into, and provide power to the proposed Gleason Federal 41-15 well if and when this well goes into production. Figure #1 below shows the density of existing development, including wells and roads, within the Gleason 41-15 Project boundary and surrounding area.

Figure #2 below shows the location of the Gleason 41-15 well and proposed infrastructure and roads.

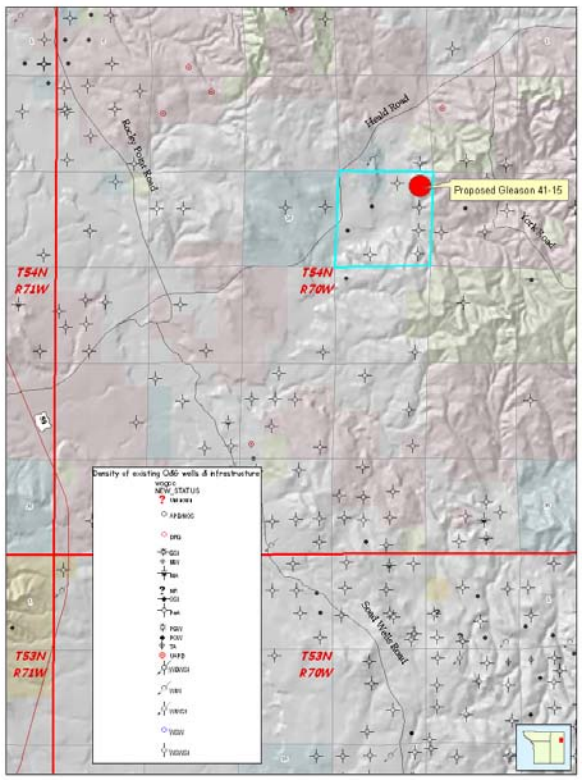


Figure 1: Density of existing O&G Wells

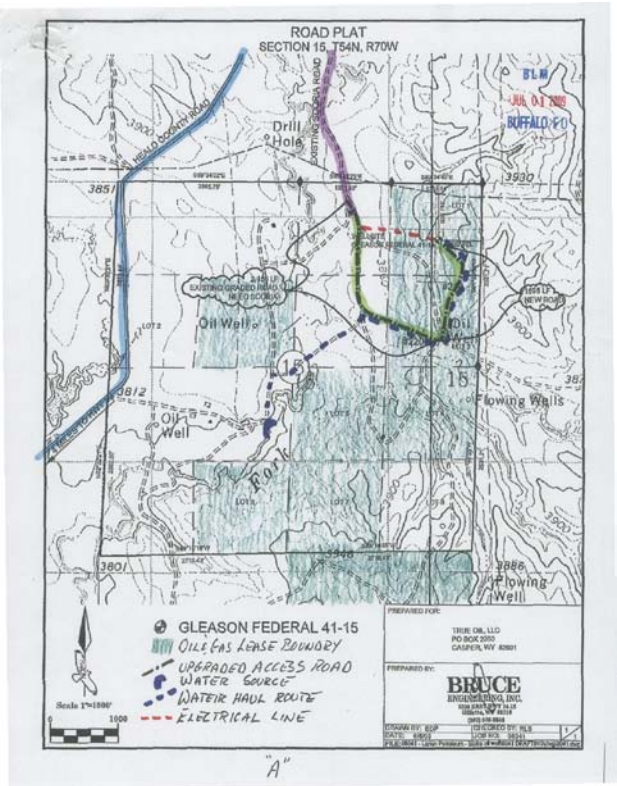


Figure 2: Proposed Gleason 41-15 well and infrastructure

Land ownership within the project area is comprised of split estate (fee surface, BLM minerals) with the portion of the land outside of the project area to the west of the proposed access road being state land.

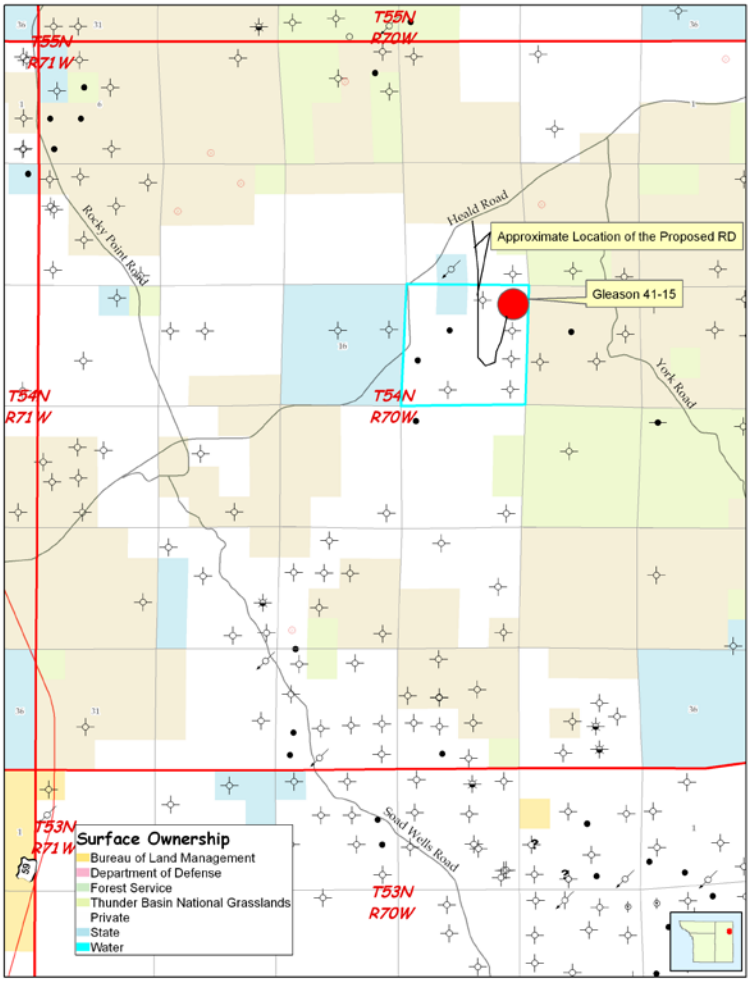


Figure 3: Surface Ownership

The action would be subject to the attached Conditions-of-Approval, for drilling of an oil/gas well on private surface/federal mineral lands within the Buffalo Field Office jurisdiction. For more detail on design features and construction practices of the proposed action, refer to the Surface Use Plan of Operations and Drilling Plans in each APD. These plans have been written and reviewed to ensure that environmental impacts to both surface and subsurface resources are eliminated or minimized. Also see the individual APD for a map showing the proposed access road and well location.

The proposed action involves:

Table 2 Disturbance for well, utilities, and access roads

Facility Gleason 41-15	**Short Term Disturbance** (Construction/Drilling)	**Long Term Disturbance** (Interim)
Well Pad	1.50acres	0.43acres
Access Road (Template/Spot Upgrade Road)	2.58 acres (0.70 miles)	2.58 acres (0.70 miles)
Buried Utilities (Flow line and Electrical) No Corridor	1.03 acres (0.28 miles)	0.00 acres
Total Disturbance	5.11 acres	3.01 acres

The proposed Gleason 41-15 well location will require an engineered (cut & fill) pad due to topography. The proposed well location is located on a gentle side slope. The dirt volumes balance at the proposed location, and avoids excessive disturbance. Physical disturbance for the well location during construction drilling, including cut and fills slopes is approximately 1.50 acres. However, the well location size will be minimized during production of the well (Interim) to 0.43 acres. During production there will be no facilities onsite aside from the well bore, pump jack, and the turnaround loop. The dominant soil at the well location is a clay loam; refer to Exhibit "D" (Gleason Federal #41-15 Reclamation Plan and Section 11 of the MSUP). The location, access roads, and buried utilities will have a 30 day stabilization COA put into effect upon completion of the well to ensure re-vegetation, reduce topsoil loss, and minimize growth of noxious weeds.

Approximately a total of 0.70 miles of road will need to be upgraded to Gold Book road standards which include grading, crowning, surfacing, and ditching (includes existing and proposed new access). The total width of the access road including the running surface and ditches will be approximately 30' feet. True Oil proposes to construct and build approximately 1595' feet of new access road. The new proposed access road will begin at the SENE of section 15 T.54N R.70W. The proposed new access to the well departs northerly from the existing oil field road in the SENE of section 15 at this point the proposed new access follows a two track northerly for approximately 800'feet, then departs cross country and continues northeasterly to the proposed well location. A plan and profile of this portion of the road was submitted by the operator and illustrates culvert placement; refer to Exhibit "A". This portion of the road will also be upgraded to Gold Book road standards which include grading, crowning, surfacing, and ditching; refer to Exhibit "D" (Gleason Federal #41-15 Reclamation Plan) for BMP's and erosion control and mitigation. The maximum grade of this road will not exceed 8%. The majority of the existing and proposed access road is in a clay loam soil type with the exception of some portions of the proposed new access road and well location which are located in soil that exhibits some sandy characteristics. Physical disturbance for the access road including the proposed new access and upgrading the portion of the existing road is approximately 2.58 acres.

Electrical line will be buried along a common corridor with the flow-line as illustrated on Exhibit "A" of the Surface Use Plan. In addition, upon the onsite of the corridor, approximately the last 1,000 feet of the line will utilize existing flow-lines already in place. Therefore, no excavation of the said line will be necessary along this segment of the line to the existing tank battery. Furthermore, approximately 600 feet of the corridor crosses an existing cultivated hay field. Therefore, the only undisturbed native range that will be disturbed will be the initial 900 feet from the well to the cultivated hay field. Refer to Exhibit "A" to the Surface Use Plan. A width of approximately 30' feet will be used during construction to install the utility corridor, no mowing or blading will be necessary for the installation of the utility corridor.

Total disturbance for well site, access road, and buried utilities is approximately 5.11 acres during the construction and drilling. The total disturbance for the well during production and interim reclamation including the access road is approximately 3.01 acres. Buried utilities will be reclaimed to final reclamation standards as soon as they are put in place to include final contouring and seeding. Overall the surface disturbance will be reduced by approximately 40% from the construction and drilling phase of the well to the production and interim reclamation phase. The access roads and associated drainage structures will be constructed and maintained in accordance with road guidelines contained in the joint BLM/USFS publication: *Surface Operating Standards for Oil and Gas Exploration and Development*, Fourth Edition (2007), and/or BLM Manual Section 9113 concerning road construction standards on projects subject to federal jurisdiction. During the drilling and production phase of operations, the road surface and shoulders will be kept in a safe and useable condition, and drainage ditches and culverts will be kept clear and free flowing. Roads must be completed before drilling begins.

If production is established on the Gleason 41-15 well, all oil and water will be piped through the flow

line to the existing tank battery in the SENW of Section 15, T54N, and R70W. The flow line will utilize 1,000' feet of existing flow-lines already in place. Therefore, no excavation will be necessary along this segment of the line. Furthermore, approximately 600 feet of corridor crosses an existing cultivated hay field. Therefore, the only undisturbed native range that will be disturbed will be the initial 900 feet from the well to the cultivated hay field. Refer to Exhibit "A" to the Surface Use Plan for further detail.

Production facilities will require an area of approximately 150'x 125' feet at the well location and will include a turnaround loop, pump jack, and well bore. An as built diagram illustrating the production facility can be found on Exhibit "B". In addition, the well pad will be reduced in size to accommodate just for the production facilities. Disturbed areas no longer needed for operations will be re-contoured, seeded with the approved seed mix, and stabilized; refer to Exhibit "D" (Gleason Federal #41-15 Reclamation Plan for further detail). These areas will be fenced will be for a period of up to two years to protect and allow a viable seedbed to become established. Power for the production facilities will be buried. The buried three phase power will be brought in from the SENW of section 15, T.54N R.70W; refer to Exhibit "A". A generator will not be required. Once the oil well is in production, a pumper will be on location daily to monitor the production facilities and to ensure the equipment is functioning properly.

Drilling and construction activities are anticipated to be completed within two years; the term of an APD. The estimated duration of drilling is ten days for drilling and ten days for completion. The well will be completed within 30 days after drilling operations. Drilling and construction occurs year-round in the Powder River Basin. Weather may cause delays lasting several days but rarely do delays last multiple weeks. Timing limitation in the form of COAs and/or agreements with surface owners may impose longer temporal restrictions on portions of this project.

Existing infrastructure has been utilized in the Gleason 41-15 project to conserve sage grouse habitat.

Mitigation measures and Recommended Management Practices (RMPs) utilized within the Gleason 41-15 project which will effectively conserve sage-grouse habitats affected by the proposal include but are not limited to the following:

1. Consolidate activities using existing roads and infrastructure.
2. Use flow lines to bring product to a central facility to reduce traffic and minimize perch sites for predators.
3. Technologies will be used that would reduce total surface disturbance within occupied sage-grouse habitat such as reinjection of produced water (injection water wells as opposed to reservoir containment).
4. Noise will be limited from industrial development or traffic to 10dBA above natural, ambient noise (~39 dBA) measured at the perimeter of the nearest Sage-grouse lek.
5. Utility corridors and flow lines will be co-located parallel and adjacent to existing access roads where feasible; previous disturbance corridors will be utilized where practical.
6. Employ 30 day site-stabilization and erosion mitigation techniques such as silt fencing, water bars, matting, erosion logs, rip-rap, to ensure re-vegetation, reduce topsoil loss, and minimize growth of noxious and invasive weeds.
7. Implement strategies to assist in prevention of the spread of noxious weeds or invasive plants detrimental to sage-grouse.
8. The produced product will be transported by flow line to an existing facility, reducing the initial disturbance.

The action would be subject to the attached Conditions-of-Approval (COAs), for drilling of an oil/gas well on private surface/federal mineral lands within the Buffalo Field Office jurisdiction. For more details on design features and construction practices of the proposed action, refer to the Master Surface Use Plan of Operations and Drilling Plans in each APD. These plans have been written and reviewed to ensure that environmental impacts to both surface and subsurface resources are eliminated or minimized.

Alternatives Considered but Eliminated from Detailed Study

One alternative would be to move the location of the drill site. Based on the onsite inspection, there are no significant environmental reasons for doing this. Table 3 provides a summary of observations and changes made at the pre-approval onsite.

Table 3 Summary of observations and changes made at onsite.

Well Name and Number	QTR	Sec	T	R	Comments
Gleason 41-15	NENE	15	54	70	Engineered pad location and template access road. Will require 30-day stabilization and additional interim reclamation efforts to ensure re-vegetation, reduce topsoil loss, and minimize growth of noxious weeds. Soil amendments may be needed to ensure re-vegetation. Vegetation indentified at the onsite included Blue Stem, Yucca, Cheet Grass, Yellow Sweet Clover, and Sagebrush. The entire access road will be graveled. BLM moved the access road east up on the ridge and changed the access coming into the well location (moved east). Required a new arch survey and a plan and profile for the new portion of the access road. An LWC was placed on the main road prior to turning into the new portion of road for the well.

AFFECTED ENVIRONMENT AND ENVIRONMENTAL IMPACTS OF THE PROPOSED ACTION & ALTERNATIVES:

A field inspection of the proposed well was conducted on 10/31/2008. The APD was received on 4/24/2008.

Name	Title	Agency
Warren G. (Rev) Morton	Landman	True Oil LLC
Jay Dee Hacklin	Construction	Quality AGG and Construction, INC.
Andy Perez	Natural Resource Specialist	BLM
Casey Freise	Supervisory NRS	BLM
B.J. Earl	Archaeologist	BLM
Scott Jawors	Wildlife Biologist	BLM
Arnie Irwin	Soil Scientist	BLM
Ted Hamersma	Road Tech.	BLM
Gail Gleason	Landowner	
Wendy Gleason	Landowner	

Topographic Characteristics

The proposed Gleason 41-15 project resides in the Soda Wells East Field, the elevation within the project area ranges from approximately 3,874’ to 3,930’ above sea level. The area is characterized by moderately

flat terrain with shallow draws. The climate is semi-arid, averaging 20.21 inches of precipitation annually. The mean annual air temperature is 48.5 degrees Fahrenheit. Major land uses in the area consist of livestock grazing, which has been the primary historic land use within the project area.

Vegetation & Soils

The Gleason 41-15 project area is located within the Powder River Basin in the Northwestern Great Plains Eco-region. The major vegetation and 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 such as Western Wheatgrass, Prairie Junegrass, Sandberg's Bluegrass and Needle and Thread. Other typical species are Threadleaf Sage, Winterfat, Thickspike Wheatgrass, Broom Snakeweed, Rubber Rabbitbrush, Prickly Pear Cactus, and Fourwing Saltbush. However, the present plant community is heavily dominated by Crested Wheatgrass and Yellow Sweet Clover due to historic development and repeated site disturbance.

The soils within the project area consist mostly of a clay loam. Topsoil depths to be salvaged for reclamation range from 6 inches on ridges 12 or more inches in bottomland. Erosion potential varies depending on the soil type, vegetative cover, and slope. Reclamation potential of the soil within the project area is moderate. Some traces of sandy soil are evident throughout the project area. However, sandy soils occur with less frequency within the project area.

Invasive Species

State-listed noxious weeds and invasive/exotic plant infestations were discovered by a search of inventory maps and/or databases or during subsequent field investigation by the proposed project proponent and the BLM.

Specific species of concern include:

- Canada thistle, which was found and identified in channel bottoms throughout the entire project area.
- Scotch thistle, which was identified and found near existing roads and oil infrastructure throughout the project area.
- Leafy spurge was found and identified in the project area.
- Cheat grass has invaded the state of Wyoming, and has been identified occurring throughout the project area.

The operator has developed an Integrated Weed and Pest Management Plan as well as mapped existing weed infestations for education and control of noxious weeds within this project.

The state-listed noxious weeds are listed in PRB FEIS Table 3-21 (p. 3-104) and the Weed Species of Concern are listed in Table 3-22 (p. 3-105).

Air Quality

Existing air quality throughout most of the Powder River Basin is in attainment with all ambient air 14 quality standards. Although specific air quality monitoring is not conducted throughout most of the Powder River Basin, air quality conditions in rural areas are likely to be very good, as characterized by limited air pollution emission sources (few industrial facilities and residential emissions in the relatively small communities and isolated ranches) and good atmospheric dispersion conditions, resulting in relatively low air pollutant concentrations.

Existing air pollutant emission sources within the region include following:

- 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;
- Dust (particulate matter) generated by vehicle travel on unpaved roads, windblown dust from neighboring areas and road sanding during the winter months; The operator has best management practices (BMPs) in place to control dust during all phases of development and operation.
- Transport of air pollutants from emission sources located outside the region;
- Dust (particulate matter) from coal mines;
- NOx, particulate matter, and other emissions from diesel trains and,
- SO2 and NOx from power plants.

For a complete description of the existing air quality conditions in the Powder River Basin, please refer to the PRB Final EIS Volume 1, Chapter 3, pages 3-291 through 3-299.

Water Resources
Watershed values, including natural drainages, would not be adversely impacted by the proposal with properly applied mitigation. Other water resources will not be adversely impacted by the proposal. Possible contamination effects of fresh water aquifers will be reduced though the use of tested casing, by setting casing at appropriate depths and by following safe repair procedures in the event of casing failure. Any fresh water bearing sands will be protected and isolated with surface casing and/or cement. All hydrocarbon bearing zone(s) will be protected and isolated by casing and cement. Other downhole well operations are expected to cause minimal impacts using standard engineering practices. The proposed well is a conventional oil well, and any produced water will be injected into a water injection well.

Cultural
Class III cultural resource inventory was performed for the Gleason Federal #41-15 well and access prior to on-the-ground project work (BFO project no. 70080150, 70080150A). Frontier Archaeology conducted a block class III cultural resource inventory following the Archeology and Historic Preservation, Secretary of the Interior's Standards and Guidelines (48CFR190) and the Wyoming State Historic Preservation Office Format, Guidelines, and Standards for Class II and III Reports. BJ Earle, BLM Archaeologist, reviewed the report for technical adequacy and compliance with Bureau of Land Management (BLM) standards, and determined it to be adequate.

Wildlife
Construction of the well pad as well as access road would result in primarily the loss of non-native vegetation and increased erosion potential (See Table 2 for disturbance). This impact will be minimal due to the application of re-vegetation and reclamation along the banks of the road and pad. The access road and pad will be constructed as shown in the APD. The entire area impacted will be ultimately reclaimed as described in the surface use plan and attached conditions of approval following plugging and abandonment of the well, access road and associated disturbed lands. If the well is capable of production, all disturbed areas not needed for production purposes will be expediently re-contoured and reclaimed to its original topography, and fenced to facilitate rapid establishment of native ground cover.

Several resources were consulted to identify wildlife species that may occur in the proposed project area. Resources that were consulted include the wildlife database compiled and managed by the BLM Buffalo Field Office (BFO) wildlife biologists, the PRB FEIS, the Wyoming Game and Fish Department (WGFD) big game and sage-grouse maps, and the Wyoming Natural Diversity Database (WYNDD).

A habitat assessment and wildlife inventory surveys were performed by Taylor Environmental consultants LLc (hereafter T&E 2008). T&E surveys for bald eagles, mountain plover, sharp-tailed grouse, greater

sage-grouse, raptor nests, and prairie dog colonies according to Powder River Basin Interagency Working Group (PRBIWG) accepted protocol 2008.

A BLM biologist conducted field visits on October 31, 2008. During this time, the biologist reviewed the wildlife survey information for accuracy, evaluated impacts to wildlife resources, and provided project modification recommendations where wildlife issues arose.

Wildlife species common to the habitat types present are identified in the PRB FEIS (pg. 3-114). Species that have been identified in the project area or that have been noted as being of special importance are described below.

Big Game

Big game species expected to be within the project area include pronghorn antelope, mule deer, and elk. The WGFD has determined that the project area contains yearlong range for pronghorn antelope, and Winter-Yearlong range for mule deer.

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. During the winter months there is a significant influx of additional animals into the area from other seasonal ranges. 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.

Aquatics

The project area is drained by the Dry Fork of the Spring Creek in the Little Powder River drainage. Fish that have been identified in the Powder River watershed are listed in the PRB FEIS (3-156-159).

Amphibian and reptile species occur throughout the Basin, but there is little recorded baseline information available about them. Confluence Consulting, Inc. identified the following species present within the Clear Creek and Powder River watersheds: Woodhouse's toad, Northern leopard frog, gopher snake, and garter snake (2004). Because sampling at the upper two sites on Clear Creek occurred late in the season, seasonality may have influenced the lack of reptiles and amphibians observed at these sites.

Migratory Birds

A wide variety of migratory birds may be found in the proposed project area at some point throughout the year. Migratory birds are those that migrate for the purpose of breeding and foraging at some point in the calendar 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). Migratory bird species of management concern that may occur in the project area are listed in the PRB FEIS (3-151). Species observed by Grouse Mountain during surveys and during the onsite inspection include various woodpecker species, swallows, turkey vultures and Townsend's solitaires.

Raptors

Raptors species expected to occur in suitable habitats within the Powder River Basin include northern harrier, golden eagle, red-tailed hawk, Swainson's hawk, ferruginous hawk, American kestrel, prairie falcon, short-eared owl, great horned owl, bald eagle, rough-legged hawk, merlin, Cooper's hawk, northern goshawk, long-eared owl, and burrowing owl. 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.

No known nests are documented within one mile of the proposed project according to the BLM data base, however T&E(2009) observed an active unknown raptor nest 0.6 miles north and out of line of site from

the proposed project. Large galleries of cottonwood trees exist along the Dry Fork of the Powder River, therefore provides nesting habitat within the project area. Prey base is limited to ground squirrels, rabbits, and known domestic cattle operations.

Threatened and Endangered and Sensitive Species

Threatened and Endangered Species

Within the BLM Buffalo Field Office there are three species that are Threatened or Endangered under the Endangered Species Act.

Black-footed ferret

The USFWS listed the black-footed ferret as Endangered on March 11, 1967. Active reintroduction efforts have reestablished populations in Mexico, Arizona, Colorado, Montana, South Dakota, Utah, and Wyoming. In 2004, the WGFD identified six prairie dog complexes (Arvada, Sheridan, Pleasantdale, Four Corners, Linch, Kaycee, and, Thunder Basin National Grasslands) partially or wholly within the BLM Buffalo Field Office administrative area as potential black-footed ferret reintroduction sites (Grenier et al. 2004).

This nocturnal predator is closely associated with prairie dogs, depending almost entirely upon them for its food. The ferret also uses old prairie dog burrows for dens. Current science indicates that a black-footed ferret population requires at least 1000 acres of black-tailed prairie dog colonies for survival (USFWS 1989).

The WGFD believes the combined effects of poisoning and Sylvatic plague on black-tailed prairie dogs have greatly reduced the likelihood of a black-footed ferret population persisting east of the Big Horn Mountains (Grenier 2003). The U.S. Fish and Wildlife Service has also concluded that black-tailed prairie dog colonies within Wyoming are unlikely to be inhabited by black-footed ferrets (Kelly 2004).

No black-tailed prairie dog colonies were identified during site visits by T&E(2009) within the project area. The project area is not located within the Kaycee complex, the nearest potential reintroduction area. Black-footed ferret habitat is not present within the proposed Gleason Federal 41-15 project area.

Ute Ladies'-Tresses Orchid

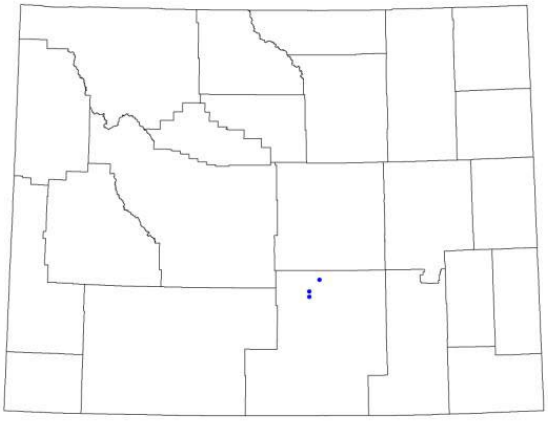
This orchid is listed as Threatened under the Endangered Species Act. It is extremely rare and occurs in moist, sub-irrigated or seasonally flooded soils at elevations between 1,780 and 6,800 feet above sea level. Habitat includes wet meadows, abandoned stream channels, valley bottoms, gravel bars, and near lakes or perennial streams that become inundated during large precipitation events. Wyoming Natural Diversity Database model predicts undocumented populations may be present particularly within southern Campbell and northern Converse Counties.

Prior to 2005, only four orchid populations had been documented within Wyoming. Five additional sites were located in 2005 and one in 2006 (Heidel pers. Comm.). The new locations were in the same drainages as the original populations, with two on the same tributary and within a few miles of an original location. Drainages with documented orchid populations include Antelope Creek in northern Converse County, Bear Creek in northern Laramie and southern Goshen Counties, Horse Creek in Laramie County, and Niobrara River in Niobrara County. In Wyoming, *Spiranthes diluvialis* blooms from early August to early September, with fruits produced in mid August to September (Fertig 2000).

BLM Wildlife biologist did not observe any potential habitat near the project area, therefore a survey was not required. No features were found with the necessary hydrological capability to support Ute ladies' tresses orchid Suitable orchid habitat is not present within the Gleason Federal 41-15 project area.

Blowout Penstemon

Blowout penstemon is a regional endemic species of the Sand Hills of west central Nebraska and the northeastern Great Divide Basin in Carbon County, Wyoming. Suitable blowout penstemon habitat consists of sparsely vegetated, early successional, shifting sand dunes and blowout depressions created by wind. In Wyoming, the habitat is typically found on sandy aprons or the lower half of steep sandy slopes deposited at the base of granitic or sedimentary mountains or ridges. Associated vegetation includes blowout grass (Redfieldia flexuosa), thickspike wheatgrass (Elymus lanceolatus), lemon scurfpea (Psoralidium lanceolatum), Indian ricegrass (Achnatherum hymenoides) and western wheatgrass (Pascopyrum smithii). The flowering period for the plant is typically between April and July. The primary vegetation around the well locatiuon is sweet clover and sage brush, no sand dunes, blowouts, or large sand deposits were identified within the well site. None of the associated vegetation species were identified within the well site.



Wyoming distribution of *Penstemon haydenii*

Sensitive Species

The USDI Bureau of Land Management (BLM) Wyoming has prepared a list of sensitive species to focus species management efforts towards maintaining habitats under a multiple use mandate. Two habitat types, prairie dog colonies and sagebrush ecosystems, specifically, are the most common among habitat types within the Powder River Basin and contain habitat components required in the life cycle of several sensitive species. These are described below in general terms. Those species within the Powder River Basin that were once listed or candidates for listing under the Endangered Species Act of 1973 and remain BLM Wyoming sensitive species are described in more detail. The authority for this policy and guidance comes from the Endangered Species Act of 1973, as amended; Title II of the Sikes Act, as amended; the Federal Land Policy and Management Act (FLPMA) of 1976; and the Department Manual 235.1.1A.

Sagebrush obligates

Sagebrush ecosystems support a variety of species. Sagebrush obligates are animals that cannot survive without sagebrush and its associated perennial grasses and forbs; in other words, species requiring sagebrush for some part of their life cycle. Sagebrush obligates within the Powder River Basin, listed as sensitive species by BLM Wyoming include greater sage-grouse, Brewer's sparrow, sage thrasher, and sage sparrow. Sage sparrows, Brewer's sparrows, and sage thrashers all require sagebrush for nesting, with nests typically located within or under the sagebrush canopy. Sage thrashers usually nest in tall dense clumps of sagebrush within areas having some bare ground for foraging. Sage sparrows prefer large continuous stands of sagebrush, and Brewer's sparrows are associated closely with sagebrush habitats having abundant scattered shrubs and short grass (Paige and Ritter 1999). Other sagebrush obligate

species include pygmy rabbit, sagebrush vole, pronghorn antelope, and sagebrush lizard. None of these species were observed in the project area during the on-site inspection.

Bald eagle

On February 14, 1978, the bald eagle was federally listed as Endangered. On August 8, 2007, the bald eagle was removed from the Endangered Species list. The bald eagle remains under the protection of the Bald and Golden Eagle Protection Act and the Migratory Bird Treaty Act. In order to avoid violation of these laws and uphold the BLM's commitment to avoid any future listing of this species, all conservation measures and terms and conditions identified in the Powder River Basin Oil and Gas Project Biological Opinion (WY07F0075) (USFWS 2007) shall continue to be complied with.

Bald eagle nesting habitat is generally found in areas that support large mature trees. Eagles typically will build their nests in the crown of mature trees that are close to a reliable prey source. This species feeds primarily on fish, waterfowl, and carrion. In more arid environments, such as the Powder River Basin, prairie dogs, ground squirrels, and lagomorphs (hares and rabbits) can make up the primary prey base. The diets of wintering bald eagles are often more varied. In addition to prairie dogs, ground squirrels, and lagomorphs, carcasses of domestic sheep and big game may provide a significant food source in some areas. Historically, sheep carcasses from large domestic sheep ranches provided a reliable winter food source within the Powder River Basin (Patterson and Anderson 1985). Today, few large sheep operations remain in the Powder River Basin. Wintering bald eagles may congregate in roosting areas generally made up of several large trees clumped together in stands of large ponderosa pine, along wooded riparian corridors, or in isolated groups. Bald eagles often share these roost sites with golden eagles as well.

One adult Bald Eagle was observed in trees along the Dry Fork of the little Powder river (UTM E478864.07, N4944985.97). No Bald Eagles were observed by T&E (2009) during surveys conducted on February 12 through March 19.

Black-tailed prairie dog

The black-tailed prairie dog was added to the list of Candidate species for federal listing on February 4, 2000 (USFWS 2000). On August 12, 2004, the U.S. Fish and Wildlife Service removed the black-tailed prairie dog's Candidate status. BLM Wyoming, considers prairie dogs as a sensitive species and continues to afford this species the protections described in the PRB FEIS. The black-tailed prairie dog is a diurnal rodent inhabiting prairie and desert grasslands of the Great Plains.

Due to human-caused factors, black-tailed prairie dog populations are now highly fragmented, and isolated (Miller 1994). Most colonies are small and subject to potential extirpation due to inbreeding, population fluctuations, and other problems, such as landowner poisoning and disease that affect long term population viability (Primack 1993, Meffe and Carroll 1994, Noss and Cooperrider 1994).

The black-tailed prairie dog is considered common in Wyoming, although its abundance fluctuates with activity levels of Sylvatic plague and the extent of control efforts by landowners. Comparisons with 1994 Digital Ortho Quads indicated that black-tailed prairie dog acreage remained stable from 1994 through 2001. However, aerial surveys conducted in 2003 to determine the status of known colonies indicated that a significant portion (approximately 47%) of the prairie dog acreage was impacted by Sylvatic plague and/or control efforts (Grenier 2004).

No black-tailed prairie dog colonies were identified during site visits by T&E (2009) within the Gleason Federal 41-15 project area.

Greater sage-grouse

The Greater sage-grouse is listed as a sensitive species by BLM (Wyoming). In recent years, several petitions have been submitted to the USFWS to list greater sage-grouse as Threatened or Endangered. On January 12th, 2005, the USFWS issued a decision that the listing of the greater sage-grouse was "not warranted" following a Status Review. The decision document supporting this outcome noted the need to continue or expand all conservation efforts to conserve sage-grouse. A judge in Idaho ordered the USFWS to conduct a new Status Review as a result of a lawsuit and questions surrounding the 2005 review (Winmill Decision Case No. CV-06-277-E-BLW, December 2007).

The Gleason Federal 41-15 project area is within a BLM designated Focus Area and Wyoming Department of Game and Fish designated Core Area, The project area is located in the transition from sagebrush to grass lands and as such provides habitat for both sage-grouse and sharp-tailed grouse. In general the project area contains all the seasonal habitats needed to support both species of grouse populations as well as the numerous avian species dependent on the sagebrush ecosystem. The scattered mosaic of sagebrush grassland has open grassy patches, generally on the ridge tops and side slopes; all seasons of use are represented, old big sage stands for winter use, plenty of water and sub-irrigated meadows for late brood rearing, and ample nesting habitat scattered with openings for brood rearing. There are numerous cultivated dry land hay meadows in the bottoms and slightly up the hill sides while these have no irrigation ditches or supplemental water they do have escape cover around the edges. Deciduous trees are along creek bottoms only, junipers and pines along the ridges to the east and north. Sage-grouse use of the Gleason well site appears to occur but is not common; two piles of old scat were identified.

Lek Surveys:

The BLM protocol requires Greater Sage-grouse surveys to be completed within 2 miles of the proposed activity between April 1 and May 7 stopping every 0.5 miles, listening and glassing. Known leks are to be observed for activity during the same period.

The Gleason Federal 41-15 is located within the Weston Core Area as identified on the Wyoming Sage-grouse Core Areas map. As such sage-grouse habitat within the area is considered for greater levels of protection than sage-grouse habitats not located within identified core areas. Three leks are identified in the Wyoming Game and Fish database within three miles of the Gleason Federal 41-15 well location. These leks were surveyed during late March and April 2009 with results as follows:

Bergreen lek (SENW Sec.1, T54, R70; 482200.00 / 4948900.00) is located approximately 2 miles northeast of the Gleason well site and immediately adjacent to Heald Road, an improved major county road that runs through the area and provides access to the ranching community as well as the oil operations in the area. Truck traffic includes oil tank truck and service industry traffic. The Buffalo Ranch is located just west of the lek site and comprises working corrals, barns, out buildings and residences. There are juniper/pine covered hills immediately to the north and south as well as trees along the creek between the lek location and the road. Even without the road and the ranching operation this is a less than ideal lek location due to the ample raptor perching opportunities. According the WGFD data base this lek has been inactive 9 of the 11 years it has been surveyed, with a peak male attendance of 3 in 1989. This lek was inactive again this year with surveys conducted March 20, April 20 and April 23. (T&E 2009)

York lek (CE1/2 Sec. 25, T54, R70; 482284.00 / 4942418.00) is located in an isolated area approximately 3 miles southeast of the proposed Gleason Federal and immediately adjacent to a dry hole marker and near a pipeline fed tire tank.With the exception of ranch related visits there is no traffic on this rough two track road. The listed legal location (SWNW Sec. 24, T54, R70) appears to be an error.

Five male sage-grouse were seen on this lek the evening of March 19 and again the morning of March 20; the Ballard well pump jacks were barely audible. The site was visited again April 23 when three males

were observed in the hiding position. A short time later a hawk was seen lifting off the area of the lek. (T&E 2009)

Spring Creek lek (NESW Sec. 19, T54, R69; 484137.00 / 4943591.00) is located approximately 3 miles southeast of the proposed well site and about one mile east of the York lek. The WGFD data base location can be accessed via FS Rd. 1015B, a vegetated two track. The lek can be observed from the York Road that runs along the ridge to the west. On March 19 this site was visited for indications of sage-grouse use. Indicators identified included "old" pellets, cecal droppings and feathers. The location was visited the nest morning no birds were observed; an area with a ½ mile radius was walked no sign was found. The propane powered pump jacks on the Ballard Wild Horse wells to the east were audible; could not tell if sage-grouse were calling or if the sound was the pump jacks.

Visited this lek again late on April 20 and found no evidence of use this year. Traveled along south along York Road following lek survey protocol and identified a *sharp-tail lek* adjacent to the road and within view of the presumed Spring Creek sage-grouse lek, numerous sharp-tailed hens were in the area.

Sharp-tailed grouse

Sharp-tailed grouse inhabit short and mixed-grass prairie, sagebrush shrublands, woodland edges, and river canyons. In Wyoming, this species is found where grasslands are intermixed with shrublands, especially wooded draws, shrubby riparian area, and wet meadows. Field surveys and a data base search by Grouse Mountain failed to show any known sharp-tailed grouse leks or suitable breeding or nesting habitat within the project area.

On April 23 observed males and at least 4 female sharp-tailed grouse on the York Road lek location (SWSW Sec 19-54-69; 483546.87 / 4943348.31). No birds were found on the WGFD Spring Creek lek location after walking a half mile radius circle; a small single engine air craft flew over at low elevation; could not see the tail number. Observed a large female sage-grouse hen at the intersection of the FS road and the Ballard access road; later observed a cecal dropping, two inches in diameter, in the middle of the road.

The following lek was identified during lek survey activities:
Chaco lek (SESW Sec 11-54-70; 480785.93 / 4946371.87) was identified during lek surveys the evening of on April 20. This sharp-tailed grouse lek is located approximately 100 yards south of the Chaco Energy Tipps-Eason Gov 1-14Tank Battery. Three to 5 males were dancing at any one time and a maximum of 10 females in attendance (photo 10). During the April 23 visit we did not observe any grouse in the area but the visit was late (9:00 am).

Mountain plover

The mountain plover was proposed for listing in 1999 (USFWS). In 2003, the USFWS withdrew a proposal to list the Mountain Plover as a Threatened species, stating that the population was larger than had been thought and was no longer declining. Mountain plovers, which are a BLM sensitive species, are typically associated with high, dry, short grass prairies (BLM 2003). Mountain plover nesting habitat is often associated with heavily grazed areas such as prairie dog colonies and livestock pastures.

The steep and densely vegetated terrain renders the project area unsuitable as mountain plover habitat.

ENVIRONMENTAL CONSEQUENCES

Table 4 Summary of Disturbance

Facility Gleason 41-15	**Short Term Disturbance** (Construction/Drilling)	**Long Term Disturbance** (Interim)
Well Pad	1.50acres	0.43acres
Access Road (Template/Spot Upgrade Road)	2.58 acres (0.70 miles)	2.58 acres (0.70 miles)
Buried Utilities (Flow line and Electrical) No Corridor	1.03 acres (0.28 miles)	0.00 acres
Total Disturbance	5.11 acres	3.01 acres

Vegetation & Soils

Impacts to vegetation and soils from surface disturbance will be reduced by following the operator's plans and BLM applied mitigation. Construction of the well pad, access road, and buried utilities (power and flow line) would result primarily in the loss of native and non-native vegetation and increased erosion potential on approximately 5.11 acres. Physical disturbance for construction of the well pad and access road is approximately 4.08 acres. Physical disturbance for utility corridor (power and flow line) is 1.03 acres. The total physical disturbance of 1.50 acres includes disturbance associated with the well pad, the spoil and topsoil storage areas, and the construction equipment and vehicle disturbance. The above disturbance represents the values in the short term during construction and drilling. Table 5 further explains the difference in disturbance values between the short and the long term.

Expedient reclamation of disturbed land with stockpiled topsoil, proper seedbed preparation techniques, and appropriate seed mixes, along with utilization of erosion control measures (e.g., waterbars, water wings, erosion logs, culverts, rip-rap, etc) would ensure that land productivity/stability is regained and maximized. Included in the surface use plans are operator committed mitigation measures and Conditions of Approval (COAs) to control the effects of erosion and sedimentation during the construction and production phases of the project. These mitigation measures and COAs include but are not limited to the following:

1. Adhering to the submitted Gleason 41-15 Reclamation Plan.
2. 30 day site stabilization with erosion control methods such as riprap, silt fence, matting, erosion logs, and water bars.
3. Energy dissipation at all culvert outlets and erosion control at all culvert inlets applied at time of construction.
4. Constructing and surfacing all proposed roads before drilling starts.

The access roads and pads will be constructed as shown in the APDs. The entire area impacted will be reclaimed as described in the surface use plan, attached reclamation plan, and conditions of approval following plugging and abandonment of the well. If the wells are capable of production, all disturbed areas not needed for production purposes will be expediently re-contoured and reclaimed.

Invasive Species

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) for the Gleason Federal 41-15 well:

• Cultural
Methods of control and prevention will be re-seeding, mulching, vehicle and equipment maintenance, and surface disturbance as detailed in the IPMP.

• Physical
Methods of control and prevention include physically mowing and hand pulling weeds (for small or new infestations).

• Biological
Biological methods of control and prevention such as domestic animal use and approved biological control agents will be used.

• Chemical
Herbicides are another method of control and prevention that may be used to treat weeds.

• Education
Weed education awareness programs include; identifying weeds and reporting weed infestations to the project manager.

Cheatgrass or downy brome (*Bromus tectorum*) and to a lesser extent, Japanese brome (*B. japonicus*) are known to exist in the affected environment. These two species are found in such high densities and numerous locations throughout NE Wyoming that a control program is not considered feasible at this time.

The use of existing facilities along with the surface disturbance associated with construction of proposed access roads and utility corridors 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 such as Canada thistle, Scotch thistle, and Leafy spurge. However, mitigation as required by BLM applied COAs will reduce potential impacts from noxious weeds and invasive plants.

To mitigate impacts from invasive and noxious weeds Conditions of Approval (COAs) are in effect. The COAs include but are not limited to the following goals and measures:

1. Control noxious and invasive weeds as appropriate.
2. Implement operator's Integrated Weed Management Plan (IWMP).

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 non-CBM 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 concluded that projected oil & gas development would not violate any local, state, tribal or federal air quality standards.

To mitigate impacts for air quality Conditions of Approval (COAs) are in effect. The COAs include but are not limited to the following goals and measures:

1. The operator will mitigate for dust control during all phases of development to the BLM authorized Officer.

Water Resources
To mitigate impacts to watershed values and natural drainages; the portion of the access road beginning at the SENE of section 15 T.54N R.70W was repositioned. As per the onsite held on 10/31/2008 it was decided to move the access road to stay away from the draw to the west to avoid problems with snow in the winter and potential runoff during the remainder of the year. The access road was moved east higher on the ridge, and changed the access coming into the well location to come in higher (shifted east). The proposed new access follows a two track northerly for approximately 800'feet, then departs cross country and continues northeasterly to the proposed well location. All engineered access roads and well location require 30 day soil stabilization, erosion control methods, and additional interim reclamation efforts including but not limited to silt fencing, matting, erosion logs, water bars, energy dissipation at all culvert outlets and erosion control at all culvert inlets.

To mitigate other potential impacts to water resources, the following Conditions of Approval (COAs) are in effect. The COAs include but are not limited to the following goals and measures:

1. Excavation activities will not use frozen or saturated soils when watershed damage might occur.
2. Waterbars will be used where appropriate to minimize soil erosion.
3. No soil or overburden will be pushed into drainages or over side slopes.
4. Measures (e.g. secondary containment) will be used to keep contaminants (sewage, oils, chemicals, produced water, etc.) out of the watershed.
5. Compliance with all state water laws.
6. The operator will adhere to the reclamation plan.

Cultural
No historic properties will be impacted by the proposed project. Following the Wyoming State Protocol Section VI (A) (1) the Bureau of Land Management electronically notified the Wyoming State Historic Preservation Officer (SHPO) on 12/22/2008 that no historic properties exist within the APE. If any cultural values [sites, artifacts, human remains (Appendix L PRB FEIS)] are observed during operation of this lease/permit/right-of-way, they will be left intact and the Buffalo Field Manager notified. Further discovery procedures are explained in the Standard COA (General) (A) (1).

Wildlife
During the environmental analysis process, the BLM identified project modifications to reduce environmental impacts. At the on-sites, all areas of proposed surface disturbance were inspected to ensure that the project would meet BLM multiple use objectives to conserve natural resources while allowing for the extraction of Federal minerals. In some cases, access roads were re-routed, and well locations, pipelines, were moved, modified, or mitigated to alleviate or minimize environmental impacts.

Big Game Direct and Indirect Effects
In the project area, Winter-Yearlong and Yearlong range for pronghorn antelope, mule deer and elk would be directly disturbed with the construction of wells, pipelines and roads. Table 4.1 summarized the proposed activities; items identified as long term disturbance would be direct habitat loss. Short-term disturbances also result in direct habitat loss; however, they should provide some habitat value as these areas are reclaimed and native vegetation becomes established.

In addition to the direct habitat loss, big game would likely be displaced from the project area during drilling and construction. A study in central Wyoming reported that mineral drilling activities displaced mule deer by more than 0.5 miles (Hiatt and Baker 1981). The WGFD indicates a well density of eight wells per section creates a high level of impact for big game and that avoidance zones around mineral facilities overlap creating contiguous avoidance areas (WGFD 2004). A multi-year study on the Pinedale Anticline suggests not only do mule deer avoid mineral activities, but after three years of drilling activity the deer have not become accustomed to the disturbance (Madson 2005).

Big game animals are expected to return to the project area following construction; however, populations will likely be lower than prior to project implementation as the human activities associated with operation and maintenance continue to displace big game. Mule deer are more sensitive to operation and maintenance activities than pronghorn, and, as the Pinedale Anticline study suggests, mule deer do not readily habituate. A study in North Dakota stated "Although the population (mule deer) had over seven years to habituate to oil and gas activities, avoidance of roads and facilities was determined to be long term and chronic" (Lustig 2003). Deer have even been documented to avoid dirt roads that were used only by 4-wheel drive vehicles, trail bikes, and hikers (Jalkotzy et al. 1997).

Winter big game diets are sub-maintenance, meaning they lose weight and body condition as the winter progresses. Survival below the maintenance level requires behavior that emphasizes energy conservation. Canfield et al. (1999) pointed out that forced activity caused by human disturbance exacts an energetic disadvantage, while inactivity provides an energetic advantage for animals. Geist (1978) further defined effects of human disturbance in terms of increased metabolism, which could result in illness, decreased reproduction, and even death.

Reclamation activities that occur within big game habitats during the spring will likely displace does and fawns due to the human presence in the area. This may cause reduced survival rate of does and fawns that must expend increased energies to avoid such activities.

Big Game Cumulative effects

The cumulative effects associated with this action are within the analysis parameters and impacts described in the PRB FEIS. For details on expected cumulative impacts, please refer to the referenced PRB FEIS, Volume 2, Chapter 4, page 4-211.

Aquatics Direct and Indirect Effects

No surface water will be produced from the Gleason Federal 41-15 wells. No streams or wetlands will be affected by the construction proposed in the Gleason Federal 41-15 project.

Aquatics Cumulative effects

The cumulative effects associated with this action are within the analysis parameters and impacts described in the PRB FEIS. For details on expected cumulative impacts, please refer to the referenced PRB FEIS, Volume 2, Chapter 4, page 4-247.

Migratory Birds Direct and Indirect Effects

Disturbance of the habitat types within the project area is likely to impact migratory birds. Native habitats are being lost directly with the construction of wells, roads, and pipelines. Prompt re-vegetation of short-term disturbance areas should reduce habitat loss impacts. Human activities likely displace migratory birds farther than simply the physical habitat disturbance. Drilling and construction noise can be troublesome for songbirds by interfering with the males' ability to attract mates and defend territory, and the ability to recognize calls from conspecifics (BLM 2003).

Habitat fragmentation results in more than just a quantitative loss in the total area of habitat available; the remaining habitat area is also qualitatively altered (Temple and Wilcox 1986). 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 within a natural gas field. Effects occurred along roads with light traffic volume (<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 (displacement) were much greater than the direct physical habitat losses.

Reclamation activities that occur in the spring may be detrimental to migratory bird survival. Those species that are edge-sensitive will be displaced further away from vegetative edges due to increased human activity, causing otherwise suitable habitat to be abandoned. If the interior habitat is at carrying capacity, then birds displaced from the edges will have no place to relocate. One consequences of habitat fragmentation is a geometric increase in the proportion of the remaining habitat that is near edges (Temple 1986). In severely fragmented habitats, all of the remaining habitat may be so close to edges that no interior habitat remains (Temple and Cary 1988). Over time, this will lead to a loss of interior habitat species in favor of edge habitat species. Other migratory bird species that utilize the disturbed areas for nesting may be disrupted by the human activity and nests may be destroyed by equipment.

Overhead power lines may affect migratory birds in several ways. Power poles provide raptors with perch sites and may increase predation on migratory birds. Power lines placed in flight corridors may result in collision mortalities. Some species may avoid suitable habitat near power lines in an effort to avoid predation.

Migratory bird species within the Powder River Basin nest in the spring and early summer and are vulnerable to the same affects as sage-grouse and raptor species. Though no timing restrictions are typically applied specifically to protect migratory bird breeding or nesting, where sage-grouse or raptor nesting timing limitations are applied, nesting migratory birds are also protected. Where these timing limitations are not applied and migratory bird species are nesting, migratory birds remain vulnerable. Additional direct and indirect effects to migratory birds are discussed in the PRB FEIS (4-231-235).

Migratory Birds Cumulative effects

The cumulative effects associated with this action are within the analysis parameters and impacts described in the PRB FEIS. For details on expected cumulative impacts, please refer to the referenced PRB FEIS, Volume 2, Chapter 4, Page 4-235. No additional mitigation measures are required.

Raptors Direct and Indirect Effects

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 mineral activities occur during nesting, they could be sufficient to cause adult birds to remain away from the nest and their chicks for the duration of the activities. This absence can lead to overheating or chilling of eggs or chicks. Prolonged disturbance can also lead to the abandonment of the nest by the adults. Both actions can result in egg or chick mortality. In addition, routine human activities near these nests can draw increased predator activity to the area and increase nest predation.

The presence of overhead power lines may impact foraging raptors. Raptors forage opportunistically throughout the Powder River Basin. Power poles provide attractive perch sites in areas where mature trees and other natural perches are lacking. From May 2003, through December 28, 2006, Service Law Enforcement salvage records for northeast Wyoming identified that 156 raptors, including 1 bald eagle, 93 golden eagles, 1 unidentified eagle, 27 hawks, 30 owls and 4 unidentified raptors were electrocuted on power poles within the Powder River Basin Oil and Gas Project area (USFWS 2006a). Of the 156 raptors electrocuted 31 were at power poles that are considered new construction (post 1996 construction standards). Additionally, two golden eagles and a Cooper's hawk were killed in apparent mid span collisions with powerlines (USFWS 2006a). Power lines not constructed to APLIC suggestions pose an electrocution hazard for eagles and other raptors perching on them; the Service has developed additional specifications improving upon the APLIC suggestions. Constructing power lines to the APLIC suggestions and Service standards minimizes but does not eliminate electrocution risk.

To reduce the risk of decreased productivity or nest failure, the BLM BFO requires a one-half mile radius timing limitation during the breeding season around active raptor nests and recommends all infrastructure requiring human visitation to be located greater than one-quarter mile from occupied raptor nests.

Additional direct and indirect impacts to raptors, from oil and gas development, are analyzed in the PRB FEIS (4-216-221).

Raptors Cumulative effects

The cumulative effects associated with Alternative C are within the analysis parameters and impacts described in the PRB FEIS. For details on expected cumulative impacts, please refer to the referenced PRB FEIS, Volume 2, Chapter 4, page 4-221.

Threatened and Endangered and Sensitive Species

Potential project effects on Threatened and Endangered Species were analyzed and a summary is provided in Table 4.2.5.1. Threatened and Endangered Species potentially affected by the proposed project area are further discussed following the table.

Threatened and Endangered Species

Table 6 Summary of Threatened and Endangered Species Habitat and Project Effects.

Common Name (scientific name)	Habitat	Presence	Project Effects	Rationale
Endangered				
Black-footed ferret (*Mustela nigripes*)	Black-tailed prairie dog colonies or complexes > 1,000 acres.	NP	NE	Suitable habitat of insufficient size.
Threatened				
Ute ladies'-tresses orchid (*Spiranthes diluvialis*)	Riparian areas with permanent water	NP	NE	No suitable habitat present.
Blowout Penstemon *Penstemon haydenii*	Active sand dunes	NP	NE	No suitable habitat present

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

LAA Likely to adversely affect
NE No Effect.
NLAA May Affect, not likely to adversely effect individuals or habitat.

Black-Footed Ferret Direct and Indirect Effects

Although the project area is within the Kaycee Complex, there are no black-tailed prairie dog colonies within or adjacent to the Gleason Federal 41-15 project area, implementation of the proposed development will have "***no effect***" on the black-footed ferret.

Ute Ladies'-Tresses Orchid Direct and Indirect Effects

The Ute ladies'-tresses orchid is threatened by energy developments, noxious weeds, and water developments. Prolonged idle conditions in the absence of disturbance (flooding, grazing, mowing) may be a threat just as repeated mowing and grazing during flowering may lead to decline (Hazlett 1996, BOP 1997, Heidel 2007). Heavy equipment used in energy development construction could dig up plants. Invasive weeds transplanted by vehicle and foot traffic in habitat could outcompete this fragile species. Restricting work from areas of Ute ladies'-tresses orchid habitat reduces these impacts.

Suitable habitat is not present near the Gleason Federal 41-15 well location. The project will have "***no effect***" on Ute Ladies,-Tresses orchid.

Blowout Penstemon Direct and Indirect Effects The primary vegetation around the well locatiuon is sweet clover and sage brush, no sand dunes, blowouts, or large sand deposits were identified within the well site. None of the associated vegetation species were identified within the well site. The project will have "***no effect"*** on blowout penstemon**.**

Sensitive Species Direct and Indirect Effects

BLM will take necessary actions to meet the policies set forth in sensitive species policy (BLM Manual 6840). BLM Manual 6840.22Astates: "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."

Sagebrush obligates

Shrubland and grassland birds are declining faster than any other group of species in North America (Knick et al. 2003). In Wyoming, existing oil and gas wells are located primarily in landscapes dominated by sagebrush, causing direct loss of this habitat. Associated road networks, pipelines, and powerline transmission corridors also influence vegetation dynamics by fragmenting habitats or by creating soil conditions facilitating the spread of invasive species (Braun 1998, Gelbard and Belnap 2003). Density of sagebrush-obligate birds within 100 m of roads constructed for natural gas development in Wyoming was 50% lower than at greater distances (Ingelfinger 2001). Increased numbers of corvids and raptors associated with powerlines (Steenhof et al. 1993, Knight and Kawashima 1993, Vander Haegen et al. 2002) increases the potential predation impact on sage-grouse and other sagebrush-breeding birds (Knick et al. 2003)

Fragmentation of shrubsteppe habitat is a major disruption that has consequences for sagebrush-obligate species (Braun et al. 1976; Rotenberry & Wiens 1980a). In fragmented habitats, suitable habitat area remains only as a remnants surrounded by unusable environments (Urban and Shugart 1984; Fahrig & Paloheimo 1988). Populations of sagebrush-obligate species decline because areas of suitable habitat decrease (Temple & Cary 1988), because of lower reproduction, and/or because of higher mortality in remaining habitats (Robinson 1992; Porneluzi et al. 1993). Fragmentation of shrubsteppe has the further potential to affect the conservation of shrub-obligate species because of the permanence of disturbance (Knick and Rotenberry 1995). Several decades are required to reestablish ecologically functioning mature sagebrush communities. Due to this, sagebrush obligate species may not return even after habitat reestablishment.

Table 7 Summary of Sensitive Species Habitat and Project Effects.

Common Name (scientific name)	Habitat	Presence	Project Effects	Rationale
Amphibians				
Northern leopard frog (*Rana pipiens*)	Beaver ponds, permanent water in plains and foothills	NP	NI	Habitat not present.
Spotted frog (*Ranus pretiosa*)	Ponds, sloughs, small streams	NP	NI	Habitat not present.
Birds				
Baird's sparrow (*Ammodramus bairdii*)	Grasslands, weedy fields	S	MIIH	Sagebrush cover will be affected.
Bald eagle (*Haliaeetus leucocephalus*)	Mature forest cover often within one mile of large water body.	S	MIIH	Project includes overhead power.
Brewer's sparrow (*Spizella breweri*)	Basin-prairie shrub	S	MIIH	Sagebrush cover will be affected.
Burrowing owl (*Athene cunicularia*)	Grasslands, basin-prairie shrub	NP	NI	Habitat not present.
Ferruginous hawk (*Buteo regalis*)	Basin-prairie shrub, grasslands, rock outcrops	S	MIIH	Sagebrush cover will be affected.
Greater sage-grouse (*Centrocercus urophasianus*)	Basin-prairie shrub, mountain-foothill shrub	S	MIIH	Sagebrush cover will be affected.
Loggerhead shrike (*Lanius ludovicianus*)	Basin-prairie shrub, mountain-foothill shrub	S	MIIH	Sagebrush cover will be affected.
Long-billed curlew (*Numenius americanus*)	Grasslands, plains, foothills, wet meadows	NP	NI	Habitat not present.
Mountain plover (*Charadrius montanus*)	Short-grass prairie with slopes < 5%	NP	NI	Habitat not present.
Northern goshawk (*Accipiter gentilis*)	Conifer and deciduous forests	S	MIIH	Forest habitat present.
Peregrine falcon (*Falco peregrinus*)	cliffs	NP	NI	No nesting habitat present.

Common Name (scientific name)	Habitat	Presence	Project Effects	Rationale
Sage sparrow (*Amphispiza billneata*)	Basin-prairie shrub, mountain-foothill shrub	S	MIIH	Sagebrush cover will be affected.
Sage thrasher (*Oreoscoptes montanus*)	Basin-prairie shrub, mountain-foothill shrub	S	MIIH	Sagebrush cover will be affected.
Trumpeter swan (*Cygnus buccinator*)	Lakes, ponds, rivers	NP	NI	Habitat not present.
White-faced ibis (*Plegadis chihi*)	Marshes, wet meadows	NP	NI	Permanently wet meadows not present.
Yellow-billed cuckoo (*Coccyzus americanus*)	Open woodlands, streamside willow and alder groves	NP	NI	Streamside habitats not present
Fish				
Yellowstone cutthroat trout (*Oncoryhynchus clarki bouvieri*)	Mountain streams and rivers in Tongue River drainage	NP	NI	Outside species range.
Mammals				
Black-tailed prairie dog (*Cynomys ludovicianus*)	Prairie habitats with deep, firm soils and slopes less than 10 degrees.	NP	NI	Prairie dog towns not present.
Fringed myotis (*Myotis thysanodes*)	Conifer forests, woodland chaparral, caves and mines	S	MIIH	Forest habitat present.
Long-eared myotis (*Myotis evotis*)	Conifer and deciduous forest, caves and mines	S	MIIH	Forest habitat present.
Spotted bat (*Euderma maculatum*)	Cliffs over perennial water.	NP	NI	Cliffs & perennial water not present.
Swift fox (*Vulpes velox*)	Grasslands	NP	NI	Habitat not present.
Townsend's big-eared bat (*Corynorhinus townsendii*)	Caves and mines.	NP	NI	Habitat not present.

Common Name (scientific name)	Habitat	Presence	Project Effects	Rationale
Plants				
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	Habitat not present.
Blowout Penstemon (	Active sand dunes	NP	NI	Habitat not present.

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

Bald eagle Direct and Indirect Effects

The presence of overhead power lines may impact foraging bald eagles. Bald eagles forage opportunistically throughout the Powder River Basin particularly during the winter when migrant eagles join the small number of resident eagles. Power poles provide attractive perch sites in areas where mature trees and other natural perches are lacking. From May 2003, through December 28, 2006, Service Law Enforcement salvage records for northeast Wyoming identified that 156 raptors, including 1 bald eagle, 93 golden eagles, 1 unidentified eagle, 27 hawks, 30 owls and 4 unidentified raptors were electrocuted on power poles within the Powder River Basin Oil and Gas Project area (USFWS 2006a). Of the 156 raptors electrocuted 31 were at power poles that are considered new construction (post 1996 construction standards). Additionally, two golden eagles and a Cooper's hawk were killed in apparent mid span collisions with powerlines (USFWS 2006a). Power lines not constructed to APLIC suggestions pose an electrocution hazard for eagles and other raptors perching on them; the Service has developed additional specifications improving upon the APLIC suggestions. Constructing power lines to the APLIC suggestions and Service standards minimizes but does not eliminate electrocution risk.

Typically two-tracks and improved project roads pose minimal collision risk. In one year of monitoring road-side carcasses the BLM Buffalo Field Office reported 439 carcasses, 226 along Interstates (51%), 193 along paved highways (44%), 19 along gravel county roads (4%), and 1 along an improved CBNG road (<1%) (Bills 2004). No road-killed eagles were reported; eagles (bald and golden) were observed feeding on 16 of the reported road-side carcasses (<4%). The risk of big-game vehicle-related mortality along CBNG project roads is so insignificant or discountable that when combined with the lack of bald eagle mortalities associated with highway foraging leads to the conclusion that CBNG project roads do not affect bald eagles. Power servicing the Gleason Federal 41-15 will be buried.

Greater sage-grouse Direct and Indirect Effects

According to BLM BFO and WGFD databases, three sage grouse leks are known to exist within the Gleason Federal 41-15 area. Leks have been shown to be reliable indicators of nesting habitat (The Northwest Wyoming Sage-Grouse Working Group 2006); Agriculture and livestock activities (calving pature) makes it unlikely that sage grouse use the project area for nesting activities.

LEKID	QQ	Q	Sec	Twn	Rng	peak male 2009	peak male 2008	peak male 2007	peak male 2006	Distance from Gleason Federal 41-15
41-Bergreen	SE	NW	1	54	70	0	0	0	0	2.1 mi
41-York	NW	SW	24	54	70	5	7	10	16	2.6 mi
41-Spring Creek	SW	NE	19	54	69	0	0	0	13	2.9 mi

All landscape characteristics that affect sage grouse habitat quantity and quality, patch size, connectivity between patches, and distance between patches, have been impacted in the project area and surrounding area by agriculture to the west of the proposed well. Past energy development in the project and surrounding area has reduced available flat, grassy openings, and has decreased patch connectivity. Field evaluations indicate that even though rough terrain, agriculture, past and current oil/gas development, and grazing in the proposed project area, the proposed Gleason Federal well is located in a Focus Area and does contain suitable seasonal habitat for sage-grouse (T&E 2009).

Research has shown that declines in lek attendance are correlated with oil and gas development. In a typical landscape in the Powder River Basin, energy development within two miles of leks is projected to

reduce the average probability of lek persistence from 87% to 5% percent (Walker et al. 2007). Several studies have shown that well density can be used as a metric for evaluating impacts to sage-grouse, 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 one well pad per square mile, resulted in calculable impacts on breeding populations, as measured by the number of male sage-grouse attending leks (State Wildlife Agencies' Ad Hoc Committee for Sage-Grouse and Oil and Gas Development 2008).

Currently, there are three producing oil wells and one water injection well within one mile of the proposed Gleason Federal well. All existing wells and the proposed well are greater than two miles from all three leks. Two miles of over head power exist within one mile of the proposed well. True Oil Company has incorporated best management practices into the Gleason Federal 41-15 well.

- Using exiting access roads
- Mowing work areas in lieu of blading,
- Piping produced water and oil off locating to minimize human presence, and maximize the area of interim reclamation.
- Burying power to the well
- Immediate reclamation after drilling to accelerate habitat effectiveness
- Removing areas of standing water, related to existing development, to reduce the potential for the spread of West Nile virus.

Sharp-tailed grouse Direct and Indirect Effects

A trimming limitation stipulation will prevent human and ground disturbing activities during breeding and nesting season. Minimal human visitation will occur within the area once production takes place, because produced oil and water will be pipelined to an existing facility located offsite.

Mountain plover Direct and Indirect Effects

Suitable mountain plover habitat is not present within the project area. The project is not likely to impact mountain plovers.

Sensitive Species Cumulative effects

The cumulative effects associated with this proposed action are within the analysis parameters and impacts described in the PRB FEIS. For details on expected cumulative impacts, please refer to the referenced PRB FEIS, Volume 2, Chapter 4, page 4-271.

Sage grouse Cumulative effects

Sage grouse habitat and sage grouse sign exists within the project area and the Gleason Federal 14-35 well location is in a designated Focus Area. Therefore, True Oil Company must demonstrate that the proposed action can be managed in a manner that effectively conserve sage-grouse habitat affected by the proposal as well maintaining a viable population of sage-grouse and associated needs(see attached Appendix A).

The presence of overhead powerlines results in changes in sage-grouse dispersal patterns and fragmentation of the habitat. Braun (1998) reported that the presence of powerlines may limit sage-grouse use within 0.6 mile in otherwise suitable habitat. Within 1 mile if the Gleason Federal 14-35 well, there is 0.23 miles of existing over head power, 7 miles of existing roads, approximately 214 acres of agricultural fields, and one dwelling with livestock operations.

The cumulative impacts of the proposed action is not expected to be significant, when considered with other existing and proposed development as well as the implementation of best management practices and timing limitation stipulation applied during breeding and nesting season. For more information on cumulative impacts, please refer to the PRB FEIS.

DESCRIPTION OF PROPOSED MITIGATION MEASURES:

I. Site Specific Conditions of Approval

Surface Use
Implementation of committed mitigation measures contained in the seven Surface Use Plans of Operations and Drilling Plans, in addition to the following Conditions-of-Approval, would ensure that no adverse environmental impacts would result from approval of the proposed action:

Conditions of Approval

1. 30 day site stabilization will be applied to the well location, access road, and utility corridor with erosion control methods such as riprap, silt fence, matting, erosion logs, and water bars.
2. Energy dissipation at all culvert outlets and erosion control at all culvert inlets applied at time of construction.
3. Constructing and surfacing all proposed roads before drilling starts.
4. The operator will adhere to the Gleason 41-15 Reclamation Plan.
5. The operator will mitigate for dust control during all phases of development.
6. Excavation activities will not use frozen or saturated soils when watershed damage might occur.
7. No soil or overburden will be pushed into drainages or over side slopes.
8. Measures (e.g. secondary containment) will be used to keep contaminants (sewage, oils, chemicals, produced water, etc.) out of the watershed.
9. The environmental color for the infrastructure will be covert green.

Wildlife
Sharp-tailed Grouse

1. The following conditions will alleviate impacts to sharp-tailed grouse:
   a. No surface disturbing activities are permitted Federal Gleason Well 41-15 between April 1 and May 31. This condition will be implemented on an annual basis for the life of the project.
   b. Sharp-tailed grouse surveys are required throughout the project area for the current breeding season and results reviewed by a BLM biologist. If an active lek is identified during the survey, the 0.64 mile timing restriction (April 1 to May 31) will be applied and surface disturbing activities will not be permitted until after the nesting season. If surveys indicate that the identified lek is inactive during the current breeding season, surface disturbing activities may be permitted within the 0.5 mile buffer until the following breeding season (April 1). The required sharp-tailed grouse survey will be conducted by a biologist following WGFD protocol. All survey results shall be submitted in writing to a Buffalo BLM biologist.

Bald Eagles

1. The following conditions will alleviate impacts to bald eagles:
   No project related actions shall occur within one mile of Dry Fork Creek annually from November 1 through April 1, prior to a winter roost survey or from February 1 through August 15 prior to a nesting survey. All survey results must be submitted in writing to the BFO and approved prior to

initiation of surface disturbing activities. This timing limitation will be in effect unless surveys determine the nest/roost to be inactive.

2. If a roost is identified and construction has not been completed, a year-round disturbance-free buffer zone of 0.5 mile will be established for all bald eagle winter roost sites. A seasonal minimum disturbance buffer zone of 1 mile will be established for all bald eagle roost sites (November 1 - April 1). Additional measures such as remote monitoring and restricting maintenance visitation to between 9:00 AM and 3:00 PM may be necessary to prevent disturbance.

Sage Grouse

1. No surface disturbing activities are permitted Federal Gleason Well 41-15 between March 1 and June 30. This condition will be implemented on an annual basis for the life of the project.
2. All proposed power will be buried in the approved corridor as agreed to in the surface use plan.

II. Site Specific

A. General

1. If any cultural values [sites, artifacts, human remains (Appendix L FEIS)] are observed during operation of this lease/permit/right-of-way, they will be left intact and the Buffalo Field Manager notified. The authorized officer will conduct an evaluation of the cultural values to establish appropriate mitigation, salvage or treatment. The operator is responsible for informing all persons in the area who are associated with this project that they will be subject to prosecution for knowingly disturbing historic or archaeological sites, or for collecting artifacts. If historic or archaeological materials are uncovered during construction, the operator is to immediately stop work that might further disturb such materials, and contact the authorized BLM officer (AO). Within five working days the AO will inform the operator as to:

    - whether the materials appear eligible for the National Register of Historic Places; the mitigation measures the operator will likely have to undertake before the site can be used (assuming in situ preservation is not necessary); and a time-frame for the AO to complete an expedited review under 36 CFR 800.11 to confirm, through the State Historic Preservation Officer, that the findings of the AO are correct and that mitigation is appropriate. The AO will provide technical and procedural guidelines for the conduct of mitigation. Upon verification from the AO that the required mitigation has been completed, the operator will then be allowed to resume construction measures.

2. If paleontological resources, either large or conspicuous, and/or a significant scientific value are discovered during construction, the find will be reported to the Authorized Officer immediately. Construction will be suspended within 250 feet of said find. An evaluation of the paleontological discovery will be made by a BLM approved professional paleontologist within five (5) working days, weather permitting, to determine the appropriate action(s) to prevent the potential loss of any significant paleontological values. Operations within 250 feet of such a discovery will not be resumed until written authorization to proceed is issued by the Authorized Officer. The applicant will bear the cost of any required paleontological appraisals, surface collection of fossils, or salvage of any large conspicuous fossils of significant scientific interest discovered during the operation.

3. Please contact (pertinent NRS), Natural Resource Specialist, @ (307) 684-1100, Bureau of Land Management, Buffalo, if there are any questions concerning the following surface use COAs.

B. Construction

1. The operator will limit vegetation removal and the degree of surface disturbance wherever possible. Where surface disturbance cannot be avoided, all practicable measures will be utilized to minimize erosion and stabilize disturbed soils.

2. Construction and drilling activity will not be conducted using frozen or saturated soil material during periods when watershed damage or excessive rutting is likely to occur.

3. Remove all available topsoil (depths vary from 4 inches on ridges to 12+ inches in bottoms) from constructed well locations including areas of cut and fill, and stockpile at the site. Topsoil will also be salvaged for use in reclamation on all other areas of surface disturbance (roads, pipelines, etc.). Clearly segregate topsoil from excess spoil material. Any topsoil stockpiled for one year or longer will be signed and stabilized with annual ryegrass or other suitable cover crop.

4. The operator will not push soil material and overburden over side slopes or into drainages. All soil material disturbed will be placed in an area where it can be retrieved without creating additional undue surface disturbance and where it does not impede watershed and drainage flows.

5. Construct the backslope no steeper than 1½:1, and construct the foreslope no steeper than 2:1, unless otherwise directed by the BLM Authorized Officer.

6. Maintain a minimum 20-foot undisturbed vegetative border between toe-of-fill of pad and/or pit areas and the edge of adjacent drainages, unless otherwise directed by the BLM Authorized Officer.

7. With the overall objective of minimizing surface disturbance and retaining land stability and productivity, the operator shall utilize equipment that is appropriate to the scope and scale of work being done for roads and well pads (utilize equipment no larger than needed for the job).

8. To minimize electrocution potential to birds of prey, all overhead electrical power lines will be constructed to standards identified by the Avian Power Line Interaction Committee (1996).

9. The operator shall utilize wheel trenchers or ditch witches to construct all pipeline trenches, except where extreme topography or other environmental factors preclude their use.

10. A flare pit will be constructed on the well pad for use during drilling operations. It will be located at least 125 feet from the well head and will be located down-wind from the prevailing winds.

11. Reserve pit will be adequately fenced during and after drilling operations until reclaimed so as to effectively keep out wildlife and livestock. This requires that it be fenced on the three nonworking sides prior to drilling and on the remaining side immediately following rig release. Fencing will be constructed in accordance with BLM specifications. (Plastic snow fence is not acceptable fencing material for conventional wells.)

12. The reserve pit will be oriented to prevent collection of surface runoff. After the drilling rig is removed, the operator may need to construct a trench on the uphill side of the reserve pit to divert surface drainage around it. If constructed, the trench will be left intact until the pit is closed.

13. The reserve pit will be lined with an impermeable liner if permeable subsurface material is encountered. An impermeable liner is any liner having permeability less than 10-7 cm/sec. The liner will be installed so that it will not leak and will be chemically compatible with all substances that may be put in the pit. Liners made of any man-made synthetic material will be of sufficient strength and thickness to withstand normal installation and pit use. In gravelly or rocky soils, a suitable bedding material such as sand will be used prior to installing the liner.

14. The reserve pit will be constructed so that at least half of its total volume is in solid cut material (below natural ground level).

15. Culverts will be placed on channel bottoms on firm, uniform beds, which have been shaped to accept them, and aligned parallel to the channel to minimize erosion. Backfill will be thoroughly compacted.

16. The minimum diameter for culverts will be 18 inches. However, all culverts will be appropriately sized in accordance with standards in BLM Manual 9113.

17. Construction and other project-related traffic will be restricted to approved routes. Cross-country vehicle travel will not be allowed.
18. Maximum design speed on all operator constructed and maintained roads will not exceed 25 miles per hour.

19. Pipeline construction shall not block nor change the natural course of any drainage. Pipelines shall cross perpendicular to drainages. Pipelines shall not be run parallel in drainage bottoms. Suspended pipelines shall provide adequate clearance for maximum runoff.

20. Pipeline trenches shall be compacted during backfilling. Pipeline trenches shall be routinely inspected and maintained to ensure proper settling, stabilization and reclamation.

21. During construction, emissions of particulate matter from well pad and road construction would be minimized by application of water or other non-saline dust suppressants with at least 50 percent control efficiency. Dust inhibitors (surfacing materials, non-saline dust suppressants, and water) will be used as necessary on unpaved roads that present a fugitive dust problem. The use of chemical dust suppressants on public surface will require prior approval from the BLM Authorized Officer.

22. Operators are required to obtain a National Pollution Discharge Elimination System (NPDES) Storm Water Permit from the Wyoming DEQ for any projects that disturb five or more acres (changing to one acre in March 2005). This general construction storm water permit must be obtained from WDEQ prior to any surface disturbing activities and can be obtained by following directions on the WDEQ website at http://deq.state.wy.us. Further information can be obtained by contacting Barb Sahl at (307) 777-7570.

23. The operator shall submit a Sundry Notice (Form 3160-5) to BLM for approval prior to construction of any new surface disturbing activities that are not specifically addressed in the approved APD or POD Surface Use Plan.

C. Operations/Maintenance

1. Confine all equipment and vehicles to the access road(s), pad(s), and area(s) specified in the approved APD or POD.

2. All waste, other than human waste and drilling fluids, will be contained in a portable trash cage. This waste will be transported to a State approved waste disposal site immediately upon completion of drilling operations. No trash or empty barrels will be placed in the reserve pit or buried on location. All state and local laws and regulations pertaining to disposal of human and solid waste will be complied with.

3. Rat and mouse holes shall be filled and compacted from the bottom to the top immediately upon release of the drilling rig from the location.

4. The operator will be responsible for prevention and control of noxious weeds and weeds of concern on all areas of surface disturbance associated with this project (well locations, roads, water management facilities, etc.) Use of pesticides shall comply with the applicable Federal and State laws. Pesticides shall be used only in accordance with their registered uses and within limitations imposed by the Secretary of Interior. Prior to the use of pesticides on public land, the holder shall obtain from the BLM authorized officer written approval of a plan showing the type and quantity of material to be used, pest(s) to be controlled, method of application, location of storage and disposal of containers, and any other information deemed necessary by the authorized officer to such use.

5. All permanent above-ground structures (e.g. , production equipment, tanks, etc.) not subject to safety requirements will be painted to blend with the natural color of the landscape. The paint used will be a color which simulates “Standard Environmental Colors.” The color selected for this (site, project), is (name and Munsell Soil Color Number).

6. Sewage shall be placed in a self-contained, chemically treated porta-potty on location.

7. The operator and their contractors shall ensure that all use, production, storage, transport and disposal of hazardous and extremely hazardous materials associated with the drilling, completion and production of this well will be in accordance with all applicable existing or hereafter promulgated federal, state and local government rules, regulations and guidelines. All project-related activities involving hazardous materials will be conducted in a manner to minimize potential environmental impacts. In accordance with OSHA requirements, a file will be maintained onsite containing current Material Safety Data Sheets (MSDS) for all chemicals, compounds and/or substances which are used in the course of construction, drilling, completion and production operations.

8. Produced fluids shall be put in test tanks on location during completion work. Produced water will be put in the reserve pit during completion work per Onshore Order #7.

9. The only fluids/waste materials which are authorized to go into the reserve pit are RCRA exempt exploration and production wastes. These include:
   - drilling muds & cuttings
   - rigwash

- excess cement and certain completion & stimulation fluids defined by EPA as exempt

It does not include drilling rig waste, such as:

- spent hydraulic fluids
- used engine oil
- used oil filter
- empty cement, drilling mud, or other product sacks
- empty paint, pipe dope, chemical or other product containers
- excess chemicals or chemical rinsate

Any evidence of non-exempt wastes being put into the reserve pit may result in the BLM Authorized Officer requiring specific testing and closure requirements.

10. Operators are advised that prior to installation of any oil and gas well production equipment which has the potential to emit air contaminants, the owner or operator of the equipment must notify the Wyoming Department of Environmental Quality, Air Quality Division (phone 307-777-7391) to determine permit requirements. Examples of pertinent well production equipment include fuel-fired equipment (e.g., diesel generators), separators, storage tanks, engines and dehydrators.

11. If this well is drilled during the fire season (June-October), the operator shall institute all necessary precautions to ensure that fire hazard is minimized, including but not limited to mowing vegetation on the access route(s) and well location(s), keeping firefighting equipment readily available when drilling, etc.

D. Dry Hole/Reclamation

1. All disturbed lands associated with this project, including the pipelines, access roads, water management facilities etc will be expediently reclaimed and reseeded in accordance with the surface use plan and any pertinent site-specific COAs.

2. Disturbed lands will be recontoured back to conform with existing undisturbed topography. No depressions will be left that trap water or form ponds.

3. The fluids and mud must be dry in the reserve pit before recontouring pit area. The operator will be responsible for recontouring of any subsidence areas that develop from closing a pit before it is completely dry. The plastic pit liner (if any) will be cut off below grade and properly disposed of at a state authorized landfill before beginning to recontour the site.

4. Before the location has been reshaped and prior to redistributing the topsoil, the operator will rip or scarify the drilling platform and access road on the contour, to a depth of at least 12 inches. The rippers are to be no farther than 24 inches apart.

5. Distribute the topsoil evenly over the entire location and other disturbed areas. Prepare the seedbed by disking to a depth of 4-to-6 inches following the contour.

6. Waterbars are to be constructed at least one (1) foot deep, on the contour with approximately two (2) feet of drop per 100 feet of waterbar to ensure drainage, and extended into established

vegetation. All waterbars are to be constructed with the berm on the downhill side to prevent the soft material from silting in the trench. The initial waterbar should be constructed at the top of the backslope. Subsequent waterbars should follow the following general spacing guidelines:

Slope (percent)	Spacing Interval (feet)
≤ 2	200
2 – 4	100
4 – 5	75
≥ 5	50

7. The operator will drill seed on the contour to a depth of 0.5 inch, followed by cultipaction to compact the seedbed, preventing soil and seed losses. To maintain quality and purity, the current years tested, certified seed with a minimum germination rate of 80% and a minimum purity of 90% will be used. On BLM surface or in lieu of a different specific mix desired by the surface owner, use the following:

   SPECIES-CULTIVAR LBS PLS/ACRE
   (To be determined at the site-specific onsite inspection)

   Slopes too steep for machinery may be hand broadcast and raked with twice the specified amount of seed. Complete fall seeding after September 15 and prior to prolonged ground frost. To be effective, complete spring seeding after the frost has left the ground and prior to May 15.

1. BLM will not release the performance bond until the area has been successfully revegetated (evaluation will be made after the second complete growing season) and has met all other reclamation goals of the surface owner and surface management agency.

2. A Notice of Intent to Abandon and a Subsequent Report of Abandonment must be submitted for abandonment approval.

3. For performance bond release approval, a Final Abandonment Notice (with a surface owner release letter on split-estate) must be submitted prior to a final abandonment evaluation by BLM.

4. Soil fertility testing and the addition of soil amendments may be required to stabilize some disturbed lands.

5. Any mulch utilized for reclamation needs to be certified weed free.

E. Producing Well

1. Landscape those areas not required for production to the surrounding topography as soon as possible. The fluids and mud must be dry in the reserve pit before re-contouring pit area. The operator will be responsible for re-contouring and reseeding of any subsidence areas that develop from closing a pit before it is completely dry.
2. Reduce the backslope to 2:1 and the foreslope to 3:1, unless otherwise directed by the BLM Authorized Officer. Reduce slopes by pulling fill material up from foreslope into the toe of cut slopes.

3. Production facilities (including dikes) must be placed on the cut portion of the location and a minimum of 15 feet from the toe of the back cut unless otherwise approved by the BLM Authorized Officer.

4. A dike will be constructed completely around the production facilities (i.e. production tanks, water tanks, and heater-treater). The dikes for the production facilities must be constructed of impermeable soil, hold 110% of the capacity of the largest tank plus 1-foot of freeboard, and be independent of the back cut.

5. Any chemicals used in treating the wells (e.g., corrosion inhibitor, emulsion breaker, etc.) will be in a secure, fenced-in area with appropriate secondary containment structure (dikes, catchment pan, etc.).

6. The load out line coming from the oil/condensate tank(s) will have a suitable containment structure to capture and recycle any oil spillage that might occur.

7. Individual production facilities (tanks, treaters, etc.) will be adequately fenced off (if entire facility not already fenced off).

8. Any spilled or leaked oil, produced water or treatment chemicals must be reported in accordance with NTL-2A and immediately cleaned up in accordance with BLM requirements. This includes clean-up and proper disposition of soils contaminated as a result of such spills/leaks.

9. Distribute stockpiled topsoil evenly over those areas not required for production and reseed as recommended.

10. Upgrade and maintain access roads and drainage control (e.g., culverts, drainage dips, ditching, crowning, surfacing, etc.) as necessary and as directed by the BLM Authorized Officer to prevent soil erosion and accommodate safe, environmentally-sound access.

11. Prior to construction of production facilities not specifically addressed in the APD/POD, the operator shall submit a Sundry Notice to the BLM Authorized Officer for approval.

12. If not already required prior to constructing and drilling the well location, the operator shall immediately upgrade the entire access road to BLM standards (including topsoiling, crowning, ditching, drainage culverts, surfacing, etc.) to ensure safe, environmentally-sound, year-round access.

13. Waterbars shall be installed on all reclaimed pipeline corridors per the guidelines in E #6.

Consultation/Coordination:

Contact	Title	Organization	Phone Number	Present at Onsite?
Warren G. Morton	Land man	True Oil LLC	(307) 235-3799	Yes
Jay Dee Hacklin	Construction	Quality Agg and Construction, Inc.	(307) 756-3400	Yes
Wendy Gleason	Land owner		(307) 682-3764	Yes
Gail Gleason	Land owner		(307) 682-3764	Yes

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Reviewer

Andy Perez, Natural Resource Specialist
Casey Freise, Supervisory Natural Resource Specialist
James Evans, Petroleum Engineer
Karen Klaahsen, Legal Instruments Examiner
Clint Crago, Archaeologist
Scott Jawors, Wildlife Biologist
Gerald Queen, Geologist
Arnie Irwin, Soil Scientist
Ted Hamersma, Road Tech
Brian Cox, Assistant Field Manager, Resources
Paul Beels, Assistant Field Manager, Minerals & Lands
Duane Spencer, Field Manager
Lead Preparer: Andy Perez, Natural Resource Specialist

APPENDIX A
Bureau of Land Management Wyoming Buffalo Field Office
Guidance for general management actions during BFO
Resource Management Plan Revision
as of August 13, 2008

Lands shown on the attached map in white will be subject to the existing decisions from the 1985 RMP (as amended) and the 2003 Environmental Impact Statement/Plan Amendment Record of Decision for the Powder River Basin. Areas that are shown in blue will be managed according to these same planning documents as well as the management actions listed below.

The additional management actions were designed in accordance with the 2003 Record of Decision which states, in part, "Land use plan monitoring will be conducted by BLM. Information gathered from this monitoring will guide mid-course corrections in adapting to the inevitable changes that will occur because of new information."

Fluid Minerals

- Processing of new proposals will be considered on a case-by-case basis.
- Efforts will be made to assure that the impacts of surface disturbing projects will be consistent with a well pad density of 640 acres.
- Lease suspension requests will be processed in accordance with current regulations and policy.

Solid Minerals

- **Processing of new proposals will be considered on a case-by-case basis.**

Vegetation Management

- Current and proposed pesticide use proposals for weed control will be reviewed on a case-by-case basis.
- Consideration of new proposals for vegetation treatments other than weed control may be considered on a case-by-case basis.

Fire Suppression

- The national strategy for fire suppression in sage-grouse habitat will be applied.
- Renewed emphasis on integration of resource advisors in fire suppression efforts.

Recreation

- Renewals for existing permitted actions will be allowed.
- New proposals for permitted activities will be considered on a case-by-case basis.
- New proposals for recreational facilities will be considered on a case-by-case basis.

Wildlife

- Approved habitat improvements and maintenance of existing improvements will be allowed.
- New proposals for habitat improvement projects will be considered on a case by case basis.

Rangeland Management

- Grazing use will continue in accordance with the grazing regulations.
- New proposals for range improvements or treatments will be considered on a case-by-case basis.

Realty

- Processing of new applications will be considered on a case-by-case basis. □□ Changes to existing Terms & Conditions will be considered on a case-by-case basis.

When considering these general management actions on a case-by-case basis consideration will be given to maintaining a viable population of sage-grouse and associated habitat needs. The proponent will be asked to demonstrate that the proposal can be managed in a manner that effectively conserves sage-grouse habitats affected by the proposal.

BLM will work with industry to include measurable conservation objectives for use in project planning. Resources such as, but not limited to, the Local Sage-Grouse Working Group Plan may be used to develop these objectives. Each proposal will be evaluated by BLM in coordination with the Wyoming Game & Fish Department to ensure that BLM maintains habitat connectivity by addressing habitat loss, degradation and fragmentation.

Criteria that will be used when reviewing proposed activities include, but are not limited to the following:

- Consolidation of infrastructure to lessen habitat fragmentation, degradation and loss.
- Effective conservation of sage-grouse seasonal habitats and habitat connectivity.
- Measurable conservation objectives.
- Consideration of measures contained in the Local Working Group Conservation Plan.