

**FINDING OF NO SIGNIFICANT IMPACT & DECISION RECORD
FOR
El Paso E&P Company, LP
Innes 12-30, 14-30 and McBeth 31-18
Environmental Assessment WY-070-09-154**

DECISION: Is to approve as described in the attached Environmental Assessment (EA) and authorize El Paso E&P Company's conventional oil wells comprised of the following 3 Applications for Permit to Drill (APDs):

WELL NAME/#/LEASE/LOCATION:

	Well Name	Well #	Qtr	TWP	RNG	Sec	Lease #
1	Innes Fed	12-30HS	SWNW	46N	74W	30	WYW 144513
2	Innes Fed	14-30HS	SWSW	46N	74W	30	WYW 172683
3	McBeth Fed	31-18	NWNE	46N	74W	18	WYW 128592

This approval is subject to adherence with operating plans and mitigation measures contained in the Surface Use Plans of Operations and Drilling Plan in the APDs. This approval is also subject to adherence with the attached Conditions of Approval and 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 the proposed action will not result in any undue or unnecessary environmental degradation. The lessee has the right to develop their existing lease provided no significant adverse or irreversible impacts occur to critical resources.

The proposed action is in conformance with the Powder River Oil and Gas Project EIS and Resource Management Plan Amendment (PRB FEIS) approved April 30, 2003 and the Approved Resource Management Plan for the Public Lands Administered by the Bureau of Land Management (BLM), Buffalo Field Office, April 2001.

FINDING OF NO SIGNIFICANT IMPACT: Based on the analysis of the potential environmental impacts of the proposed action in the attached environmental assessment, I have determined that NO significant impacts are expected and, therefore, an environmental impact statement is not required.

Field Manager:

Date: 9/29/09

**BUREAU OF LAND MANAGEMENT
BUFFALO FIELD OFFICE
ENVIRONMENTAL ASSESSMENT**

**Innes 12-30, 14-30 and McBeth 31-18
EA # WY-070-09-154**

Proposed Applications to Drill (APDs):

	Well Name	Well #	Qtr	TWP	RNG	Sec	Lease #
1	Innes Fed	12-30HS	SWNW	46N	74W	30	WYW 144513
2	Innes Fed	14-30HS	SWSW	46N	74W	30	WYW 172683
3	McBeth Fed	31-18	NWNE	46N	74W	18	WYW 128592

Applicant: El Paso E&P Company, LP (El Paso)

Affected Surface Owner: Louis McBeth

County: Campbell

Introduction

This environmental assessment (EA) was conducted by the Buffalo Field Office (BFO) Bureau of Land Management (BLM) to address site specific analysis of each of the above APDs. This analysis tiers onto and incorporates by reference the information and analysis contained in the Powder River Basin Oil and Gas Project Environmental Impact Statement and Resource Management Plan Amendment (PRB FEIS), #WY-070-02-065 (approved April 30, 2003), pursuant to 40 CFR 1508.28 and 1502.21. The EA details site specific impacts of El Paso's 3 proposed oil wells and essential infrastructure (roads, power, water and pipelines) for development in Campbell County, Wyoming, T. 46N, R. 74W.

Background

The Powder River Basin expands from the gently rolling hills on the eastern portion of the basin to the Powder River breaks area toward the Big Horn Mountains on the west side of the basin. Due to the nature of the topography and underlying geology in the PRB, placement of well locations, production facilities, pipelines and utilities may require relocation to less environmentally sensitive areas during the planning stages of development.

1. Purpose and Need

Three APDs were submitted to BLM by El Paso for development of oil/gas on valid federal oil and gas leases. The purpose of the proposal is to produce oil from federal leases. Leases are issued to applicants by the BLM to further develop oil and gas reserves in the United States. It is necessary to analyze the entire project area to thoroughly ascertain the operator's proposal, calculate disturbance, and effectively apply environmental mitigation.

Agency Responsibilities

Federal mineral royalties are directed to the United States. Due to nature of the mineral, Federal oil and gas can be drained by neighboring oil and gas development. Concurrent development of Federal minerals avoids drainage by private entities and protects the financial interest of the United States.

BLM recognizes extraction of oil and gas resources play an essential role in meeting the nation's need for energy resources. As a result, private exploration and development of the Federal Reserves are integral in the agencies' oil and gas leasing program 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 energy production and provides mitigation measures to protect multiple resources.

Relationship to Statutes, Regulations, or Other Plans

The proposed action is in conformance with the terms and the conditions of the Approved Resource Management Plan for the Public Lands Administered by the Bureau of Land Management, Buffalo Field Office, April 2001 (BFO 2001), the PRB FEIS 2003 and as required by 43 CFR 1610.5 (CFR 2006).

Current Land Use Plan

The proposed action responds to multiple-use goals and objectives stated in the 1985 Buffalo RMP and the 2003 PRB FEIS. The action conforms to the terms and the conditions of the RMP and the PRB FEIS, as required by 43 CFR 1610.5.

Buffalo Resource Management Plan Revision and Interim Protection of Sage-Grouse

The Buffalo RMP is currently under revision. Sage-grouse are currently under consideration for listing under the Endangered Species Act. Therefore, the BFO established sage-grouse "focus areas" with rigorous interim protections in order to preserve decision space during this time. Actions proposed in focus areas would encounter more stringent protections for sage-grouse. Future actions within focus areas may be considered on 640 acre spacing. BFO will consider plans of development that demonstrate proposals managed in a manner which effectively conserves sage-grouse habitat.

Outside the focus areas, the BFO will continue to apply mitigating measures and consider well densities up to 80-acre spacing depending on quality of sage-grouse habitat. Site-specific mitigating measures will be applied incorporating the best available science and technology.

These El Paso wells are not within a sage-grouse focus area. The following EA will further determine if the project area has high quality sage-grouse habitat, as indicated by the University of Montana model. The analysis will identify potential mitigation measures under BLM's multiple-use mandate.

Surface Ownership and Mineral Ownership

The proposed project is located on both private and BLM administered surface. Louis McBeth is the private surface owner in this project.

2. Alternatives including the Proposed Action

Three alternatives, A, B, and C were evaluated. A brief description of each alternative follows.

2.1. Alternative A - 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.

2.2. Alternative B - Proposed Action

Alternative B is the “proposed action” alternative, as originally submitted to the BLM by El Paso, prior to any BLM review or modifications.

Description of the Proposed Action

The proposed action is to horizontally drill the above 3 sites for oil. It includes 3 constructed pads and access roads. This proposal is subject to the attached Conditions of Approval (COAs), for drilling oil/gas 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 of the APDs. 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 APDs for maps showing the proposed access roads and well locations.

2.3. Alternative C - Modified Proposed Action

Alternative C represents a modification of Alternative B based on the operator and BLM working cooperatively to reduce environmental impacts. The description of Alternative C is the same as Alternative B with the addition of the project modifications identified by BLM and the operator at on-site visits, following the initial project proposal.

At the on-sites, all proposed surface disturbance was inspected to insure that the project would meet BLM multiple use objectives to conserve natural resources while allowing extraction of Federal minerals. In some cases, access roads were re-routed; well locations, pipelines, discharge points and other water management control structures were moved, modified, mitigated or dropped from further consideration to alleviate environmental impacts. Site specific mitigation and/or COAs were added to alleviate environmental effects of the proposed action. Specific changes made at the on-site are identified under Alternative C.

Alternative C represents BFO’s efforts to maintain proposed spacing and infrastructure requirements consistent with the purpose and need. It incorporates sage-grouse habitat mapping, site verification of habitat suitability, and includes mitigation to reduce environmental effects to multiple resources.

2.4. Alternatives Considered but Not in Detail

One alternative would be to move the location of the drill sites. Two of the three sites neighbor existing conventional oil well pads. Had the operator predicted the need for larger sites prior to building the original locations there would have been pads constructed to locate both drill holes on one location. However, horizontal technology was not used at the time of initial construction, and therefore not planned. Due to topographical setting and conflicts with other conditions such as major roads, power lines and drainages, original sites cannot be expanded. Based on extensive discussion between El Paso and the BFO, and based on the onsite inspections, there are no better alternative sites for these three additional locations.

Site Specific Conditions of Approval

Geological requirement

1. Gamma Ray logs are required to be run from surface to total measured depth of well.

Surface

1. 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 the Innes 12-30, 14-30 and McBeth 31-1 project is Covert Green (18-0617 TPX).

2. Topsoil will be salvaged for use in reclamation on all areas of surface disturbance (roads, pipelines, etc.). Clearly segregate topsoil from excess spoil material. Proposed disturbance areas shall be stabilized in a manner which eliminates accelerated erosion until a self-perpetuating non-weed; native plant community has stabilized the site in accordance with the Wyoming Reclamation Policy.
3. The operator will follow the guidance provided in the Wyoming Policy on Reclamation (IM WY-90-231) specifically the following:
Reclamation Standards:
 - C. 3 The reclaimed area shall be stable and exhibit none of the following characteristics:
 - a. Large rills or gullies.
 - b. Perceptible soil movement or head cutting in drainages.
 - c. Slope instability on, or adjacent to, the reclaimed area in question.
 - C.4. The soil surface must be stable and have adequate surface roughness to reduce runoff and capture rainfall and snow melt. Additional short-term measures, such as the application of mulch, shall be used to reduce surface soil movement.
 - C.5. Vegetation canopy cover (on unforested sites), production and species diversity (including shrubs) shall approximate the surrounding undisturbed area. The vegetation shall stabilize the site and support the planned post disturbance land use, provide for natural plant community succession and development, and be capable of renewing itself. This shall be demonstrated by:
 - a. Successful onsite establishment of species included in the planting mixture or other desirable species.
 - b. Evidence of vegetation reproduction, either spreading by rhizomatous species or seed production.
 - C.6. The reclaimed landscape shall have characteristics that approximate the visual quality of the adjacent area with regard to location, scale, shape, color and orientation of major landscape features and meet the needs of the planned post disturbance land use.
4. Any mulch utilized for reclamation needs to be certified weed free.
5. If storage of construction equipment on well locations becomes necessary beyond typical construction timeframes, a sundry will be submitted to designate this area for long term storage.
6. If there are no site specific conflicts with production and/or development, then interim reclamation will include seeding up to the anchors.
7. The operator will drill seed on the contour to a depth of 0.5 inch, followed by cultivation 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	% in Mix	Lbs PLS
Western Wheatgrass - <i>Rosana</i>	30	3.6
Bluebunch Wheatgrass – <i>Secar or P-7</i>	10	1.2
Green needlegrass - <i>Lodorm</i>	25	3.0
Slender Wheatgrass	20	2.4
White – <i>Antelope</i> or Purple Prairie Clover – <i>Bismarck</i>	5	0.6
Prairie coneflower	5	0.6
Rocky Mountain beeplant	5	0.6

Species - Cultivar	% in Mix	Lbs PLS
Totals	100%	12 lbs/acre

This is a recommended seed mix based on the native plant species listed in the NRCS Ecological Site descriptions, U.W. College of Ag. and seed market availability.

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.

Wildlife

Greater Sage-grouse

1. Surface disturbing activities are prohibited between March 1 and June 15. This condition will be implemented on an annual basis for the duration of surface disturbing activities.

Raptors

The following condition of approval will alleviate impacts to raptors:

1. No surface disturbing activity shall occur from 1 February through 31 July, annually, prior to a raptor nest survey for the current breeding season.
2. Surveys to document nest occupancy shall be conducted by a biologist following BLM protocol, between April 15 and June 30. All survey results shall be submitted in writing to a Buffalo BLM biologist and approved prior to surface disturbing activities. Surveys outside this window may not depict nesting activity. If a survey identifies active raptor nests, a 0.5 mile timing buffer will be implemented. The timing buffer restricts surface disturbing activities within 0.5 mile of occupied raptor nests from February 1 to July 31.

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

Alternatives Considered but Not in Detail

One alternative would be to move the location of the drill sites. Two of the three sites neighbor existing conventional oil well pads. Had the operator predicted the need for larger sites prior to building the original locations, there would have been pads constructed to locate both drill holes. However, horizontal technology was not used at the time of initial construction, and therefore not planned. Due to topographical setting and conflicts with other conditions such major roads, power lines and drainages, original sites cannot be expanded. Based on extensive discussion between El Paso and the BFO, and based on the onsite inspections, there are no better alternative sites for these three additional locations.

3. Existing Environment

The NOS's were received on received on October 29, 2008. Notice of Staking onsite was conducted on February 12, 2009. By the following personnel:

DATE	NAME	TITLE	AGENCY
02-12-09	Jennifer Spegon	Natural Resource Specialist	BLM
02-12-09	Scott Jawors	Biologist	BLM
02-12-09	Pat Cole	Biologist	BLM
02-12-09	Mike Brown	Consultants	H&B Petroleum Consultants
02-12-09	Larry Brown	Consultants	H&B Petroleum Consultants

This section describes the environment that would be affected by implementation of the Alternatives described in Section 2. Aspects of the affected environment described in this section focus on the relevant major issues.

3.1. Topography

This project is located approximately 30 miles south of Gillette, Wyoming, off the Black and Yellow road, north of the Pumpkin Buttes.

3.2. Surface Resources

Elevations range from 1,500 to 1,600 ft. The topography is gently rolling hills of sagebrush grasslands and cultivated pastures with small, ephemeral drainages throughout the area. For the last 150 years the lands have been utilized for ranching. Oil development was established in this area about 50 years ago. CBNG development began on fee and State leases in the late 1990s and is currently being developed on surrounding Federal leases. There are existing oil well pads and infrastructure adjacent to two of the proposed pads. The surface ownership is private and primarily used for livestock, wildlife, CBNG and oil production.

3.2.1. Vegetation

Vegetation in this area of the Powder River Basin is mixed-prairie grassland. Plant communities historically evolved in the grassland prairie with grazing by large herbivores. Vegetation is a mosaic of shrub steppe with rabbit brush, sagebrush and other shrubs mixed with grasslands which naturally depend on soil type, slope and topography.

Vegetation in this project area reflects human modification and utilization. Shrubs are sparse, due to the current use of ranching in this area. The operator is cooperating with the private landowner to ensure the oil field is maintained for grazing by domestic livestock.

3.2.2. Soils

To determine ecological sites within the proposed action, BLM specialists analyzed soils data from onsite field visits and compared their findings with the Natural Resources Conservation Service (2005 NRCS) Soil Surveys. Ecological sites identified in the project range from a sandy to loamy soil. Topsoil depths, to be salvaged for reclamation, range from 6-8 inches. Many of the soils and landforms of this area present distinct challenges for development. The main soil limitations are depth to bedrock, low organic matter content and low water holding capacity, and high erosion potential due to winds.

Technical Guides for the Major Land Resource Area 58B Northern Rolling High Plains, in the 10-14" Northern Plains precipitation zone. Soil type and plant communities are listed below:

Well Name	Well #	Soil #	Plant Community
McBeth Fed	31-18	116 Loamy 10-14"	<i>Rhizomatous wheatgrass/ Needleandthread</i>
Innes Fed	12-30 HS	147 Loamy 10-14"	<i>Rhizomatous wheatgrass/ Needleandthread</i>
Innes Fed	14-30 HS	236 Sandy 10-14"	<i>Needleandthread /Prairie Sandreed</i>

Soil types were derived from using the Natural Resource Conservation Service, (NRCS, USDA)

Loamy Soils - Rhizomatous Wheatgrasses, Needleandthread, Blue Grama Plant Community

Potential vegetation is about 75% grasses or grass-like plants, 15% forbs, and 10% woody plants. The state is dominated by cool season midgrasses. The major grasses include western wheatgrass, bluebunch wheatgrass, needleandthread, and little bluestem. Other grasses occurring on the state include Cusick's and Sandberg bluegrass, blue grama, and prairie junegrass. Big sagebrush is a conspicuous element of this state, occurring in a mosaic pattern, and makes up 5 to 10% of the annual production.

Sandy Soils - Needleandthread/ Prairie Sandreed Plant Community

Potential vegetation is about 75% grasses or grass-like plants, 15% forbs, and 10% woody plants. The state is a mix of warm and cool season midgrasses. The major grasses include needleandthread, prairie sandreed, little bluestem, and sideoats grama. Other grasses occurring on the state include bluebunch wheatgrass, Sandberg bluegrass, blue grama, and threadleaf sedge.

3.2.3. Air Quality

Existing air quality throughout most of the Powder River Basin is in attainment with all ambient air 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 [NO_x]) from existing natural gas fired compressor engines used in production of natural gas and CBNG; and, gasoline and diesel vehicle tailpipe emissions of combustion pollutants;
- Dust (particulate matter) generated by vehicle travel on unpaved roads, windblown dust from neighboring areas and road sanding during the winter months;
- Transport of air pollutants from emission sources located outside the region;
- Dust (particulate matter) from coal mines;
- NO_x, particulate matter, and other emissions from diesel trains and,
- SO₂ and NO_x 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.

3.2.4. Water Management

The area lies near the head waters of the Middle Prong that drains into Wild Horse Creek. This area falls within the 10-14 inch precipitation zone.

3.2.5. Invasive Species

The following state-listed noxious weeds and/or weed species of concern infestations were discovered by a search of inventory databases on the Wyoming Energy Resource Information Clearinghouse (WERIC) web site (www.weric.info):

- Black henbane

The WERIC database was created cooperatively by the University of Wyoming, BLM and county Weed and Pest offices.

3.3. Wildlife

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 BLM biologist conducted a field visit on February 12, 2008. During the visit, the biologist evaluated potential impacts to wildlife resources, and provided project modification recommendations.

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.

3.3.1. 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. The affected environment for pronghorn is discussed in pp. 3-117 to 3-122 in the PRB FEIS and for mule deer in pp. 3-127 to 3-132.

3.3.2. Aquatics

The Wyoming Department of Environmental Quality (DEQ) regulates effluent discharge through the National Pollution Discharge Elimination System in compliance with the Federal Water Pollution Control Act and the Wyoming Environmental Quality Act. The Wyoming DEQ has established effluent limits for the protection of game and non-game, aquatic life other than fish, wildlife, and other water uses.

The project area is in an upland location, and drainage would not reach the Powder River. Fish that have been identified in the Powder River watershed are listed in the PRB FEIS (3-156-159).

3.3.3. 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).

3.3.4. 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, rocky outcrops, and tree cavities. Prey base is limited to ground squirrels, rabbits, and known domestic sheep operations. One known ferruginous hawk nest is located within one mile of the project.

3.3.5. Threatened and Endangered

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

3.3.5.1. 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 have also concluded that black-tailed prairie dog colonies within Wyoming are unlikely to be inhabited by black-footed ferrets (Kelly 2004).

Black-footed ferret habitat is not present within or adjacent to the project area.

3.3.5.2. 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). Ute-Ladies Tresses Orchid habitat is not present within the project area.

3.3.5.3. 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. Blowout penstemon habitat is not present within the project area.

3.3.6. Sensitive Species

The Wyoming BLM 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.

3.3.6.1. 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 sagebrush vole, pronghorn antelope, and sagebrush lizard.

3.3.6.2. 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, compliance with all conservation measures, and terms and conditions identified in the Powder River Basin Oil and Gas Project Biological Opinion (WY07F0075) (USFWS 2007) shall be continued.

3.3.6.3. Prairie Dogs

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. Wyoming BLM 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. No known prairie dog colonies occur within the project area.

3.3.6.4. Sage Grouse

The affected environment for greater sage-grouse (herein referred to as sage-grouse) is discussed in the PRB FEIS (pg. 3-194 to 3-199). In addition to being listed as a Wyoming BLM sensitive species, sage-grouse are listed as a WGFD SGCN, with a rating of NSS2, because populations are declining, and they are experiencing ongoing significant loss of habitat. The Wyoming Bird Conservation Plan rates them as a Level I species, indicating they are clearly in need of conservation action. They are also listed by USFWS as a Bird of Conservation Concern for Region 17, which encompasses the project area. BCCs are those species that represent USFWS's highest conservation priorities, outside of those that are already listed under ESA. The goal of identifying BCCs is to prevent or remove the need for additional ESA bird listings by implementing proactive management and conservation actions. Golden eagles were also identified as a Level III species in the Wyoming Bird Conservation Plan

In recent years, several petitions have been submitted to USFWS to list sage-grouse as threatened or endangered under the ESA. On 12 January 2005, 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. In 2007, the U.S. District Court remanded that decision, stating that USFWS's decision-making process was flawed and ordered USFWS to conduct a new Status Review (Winmill Decision Case No. CV-06-277-E-BLW, December 2007).

The BFO has taken several steps to consider the evolving information on impacts to sage-grouse which could result from development activities on federal lands. These steps include:

- February 2008: BFO consolidated research and data to identify high-quality sage-grouse habitat in the Powder River Basin. University of Montana developed models indicating quality of habitat using topographic and vegetative criteria and habitat selection by radio-collared birds to identify

areas with high potential for use by nesting/wintering birds. The models are divided into habitat categories of 1 through 5. Categories 1 & 2 are not considered suitable habitat. Category 3 may have the vegetative components necessary for suitable habitat. Categories 4 & 5 have the vegetative components for suitable habitat, and meet criteria for topography, slope and other landscape level characteristics that were indicated through analysis of radio-collared sage-grouse. The 4 and 5 categories of habitats are considered “high-quality”.

- March 2008: BFO, Wyoming State Office (WYSO) and Washington Office (WO) established the need for a Resource Management Plan (RMP) approach to evaluate impacts to sage-grouse and habitat. A RMP amendment or revision was discussed. The decision to begin a RMP revision was approved two years ahead of the originally scheduled date.
- May 28, 2008: BFO conducted a public meeting to present habitat information developed through research in the Powder River Basin. BFO solicited additional information from the public and energy development companies to refine sage-grouse habitat maps. The objective was to establish areas of interim management for sage-grouse to preserve decision space during the RMP process.
- August 13, 2008: BFO released its *Guidance for general management actions during BFO Resource Management Plan Revision* and a map identifying the Focus Areas. The guidance contained criteria for any proposed development in Focus Areas (Appendix B). For fluid mineral development inside Focus Areas, this guidance includes the following requirement; “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.” The guidance also states that “Efforts will be made to assure that the impacts of surface disturbing projects will be consistent with a well pad density of 640 acres.”

Efforts to minimize impacts to high-quality sage-grouse habitats outside the Focus Areas will be far less restrictive, with well densities up to 80-acre spacing, but may include site-specific mitigating measures suggested by the best available science.

- August 1, 2008: Concurrent with BFO efforts, the Governor of the State of Wyoming issued an Executive Order (EO 2008-2) mandating special management for all lands within sage-grouse Core Population Areas. Lands for special management were identified by the Wyoming Governor’s Sage-Grouse Implementation Team, and generally followed the boundaries of the majority of the Focus Areas identified by the BFO. This team also recommended stipulations to be placed on development activities on state lands to ensure existing habitat function is maintained within those areas. EO 2008-2 also identifies objectives outside of Core Areas, including that “...development scenarios should be designed and managed to maintain populations, habitats and essential migration routes outside core population areas.”
- August 13, 2008 to the Present: BFO crafted an updated impacts assessment to be included in all project analyses affecting sage-grouse habitat. This analysis included research conducted in the Powder River Basin and other sage-grouse research published since the 2003 PRB FEIS and ROD. The analysis explicitly tied impacts to the impacts accepted under the 2003 ROD.
- October 1, 2008: BFO officially began the RMP revision. This process was accelerated by two years to more rapidly assess impacts to sage-grouse.
- April 14, 2009: BFO/WYSO entered into an agreement with the University of Montana and the Miles City Field Office to conduct a population viability analysis in the Powder River Basin. The emphasis will be on the adequacy of BFO Focus Areas for maintenance of a persistent sage-grouse population. Information gathered will be used in developing alternatives for the RMP revision.
- May, 2009: The WGFD released an updated version of its *Recommendations for Development of Oil and Gas Resources within Important Wildlife Habitats*, which further described management objectives for sage-grouse outside Core Areas: “Non-core areas should not be construed as “sacrifice areas” since this conservation strategy requires habitat connectivity and movement

between populations in core areas. The goal in non-core areas is to maintain habitat conditions that will sustain at least a 50% probability of lek persistence over the long term.”

In conformance with Appendix E of the PRB FEIS ROD, BLM BFO has initiated actions within the PRB FEIS analysis area in response to additional information regarding impacts to sage-grouse. These measures include:

- Early initiation of a RMP revision, based on the evaluation of monitoring data generated under the mitigation monitoring and reporting plan (MMRP) in Appendix E of the PRB FEIS ROD.
- 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 RMP process.
- 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 BFO, and the University of Montana.
- Development of alternatives that modify the proposed action to reflect the best available science in sage-grouse management.
- Development of conditions of approval, specific to sage-grouse management, that incorporate some recommendations from recent research, the NE Local Sage-grouse Working Group, and the Petroleum Association of Wyoming.

Suitable (as defined in Soehn et al. 2001) sage-grouse habitat is present in the project area. The project area consists of a continuous stands of moderately dense sagebrush, characterized by approximately 20-25% canopy cover, based on an ocular estimate at the onsite. The understory is dominated by a mix of perennial and annual grasses. One unoccupied lek, 38-Black Butte sage grouse lek is within 2 mile of the 31-18 well.

3.3.6.5. Sharp-tailed grouse

In Wyoming, this species is found where grasslands are intermixed with shrublands, especially wooded draws, shrubby riparian area, and wet meadows. Habitat within the project area has limited potential to support sharp-tailed grouse. The mosaic of grasslands and sagebrush-grasslands that occurs along the grassy ridges and knolls are present within one mile of the project area may provide marginal nesting habitat. No known sharp-tailed leks occur within one mile the project.

3.3.6.6. 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 locations of the proposed wells are in areas of domestic sheep grazing however, the majority of the vegetated community is sage brush on topography with slopes greater than three percent. Therefore, mountain plover habitat does not occur within the project.

3.4. Cultural Resources

A previously reviewed and accepted Class III cultural resource inventory (BFO # 70040031) adequately covered the proposed El Paso Innes Federal 12-30 HS well and access. No cultural resources are in the area of potential effect. Class III cultural resource inventory was performed for the El Paso Innes Federal 14-30 HS well and access and the El Paso Mc Beth Federal 31-18 well and access prior to on-the-ground project work (BFO project no. 70090020, 70090023). Greer Services conducted two block and linear class III cultural resource inventories 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. Ardeth Hahn, BLM Archaeologist, reviewed the reports for technical adequacy and compliance with Bureau of Land Management (BLM) standards, and determined them to be adequate. No cultural resources are in the area of potential effect. On 8/31/2009 Ardeth Hahn, BLM Archaeologist, electronically notified the Wyoming State Historic Preservation Office (SHPO) following section VI (A) (1) of the Wyoming State Protocol, of a finding of no effect for the proposed project.

4. Environmental Consequences

4.1. Surface Resources

Construction of the well pads as well as access roads would result in primarily the loss of vegetation and increased erosion potential on approximately 5.25 acres (3 well pads x 1.75 acres each = 5.25 acres). Access roads are proposed to corridor with the existing roads in this developed oil field. New road disturbance from the existing road to the pads total 1.7 acres. Future pipelines may be tiered to this EA if they corridor with the road. Pipelines may be an additional 0.4 acres. If this is a producing well, overhead power may be utilized. Both the wells in section 30 adjoin existing well pads, therefore any overhead power will be on existing disturbance. The 31-18 well is 1020' from the nearest power drop, and it may require overhead power if this well is a producer, which would result in an additional 0.35 acres of disturbance.

SUMMARY OF DISTURBANCE

Facility	No. or Mileage	Factor	Disturbance (acres)	Duration
Total	3		5.25 acres	
3 Well Pad(s)	340L*225W	W*L/43560	1.75 (3)	Long Term
Improved Roads	1850'' 600'' 230'' 1020''	40' Corridor	1.7 acres	Long Term
Spot Upgrade on Roads		N/A	N/A	Long Term
Pipelines	1085'' 600'' 230'' 1020''	15' Corridor	0.4 acres	Short Term

4.1.1. Vegetation

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 pads, engineered road section, spot upgrades to existing primitive roads as well as road improvements would result in the loss of both native and non-native vegetation, and increased erosion potential within the project area. 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., re-spreading topsoil, mulching, waterbars, water wings, and culverts) would ensure that land productivity/stability is regained and maximized.

Surface disturbance will be reduced with the application of re-vegetation and reclamation along the banks of the road, over the pipelines and around the pads. The access roads and pads will be constructed as shown in the APDs. The entire area impacted will be ultimately restored to its pre-disturbance condition as described in the surface use plans and attached conditions of approval following plugging and abandonment of the wells, access roads and associated disturbed lands. If the wells are capable of

production, all disturbed areas not needed for production purposes will be expediently recontoured and reclaimed for interim restoration.

4.1.2. Soils

The effects to soils resulting from well pad, access roads and pipeline construction include:

- Modification of hill slope hydrology.
- Mixing of horizons which occur where construction on roads, pipelines or other activities take place. Mixing may result in removal or relocation of organic matter and nutrients to depths where it would be unavailable for vegetative use. Soils which are more susceptible to wind and water erosion may be moved to the surface. Soil structure may be destroyed, which may impact infiltration rates. Less desirable inorganic compounds such as carbonates, salts or weathered materials may be relocated and have a negative impact on re-vegetated areas. This drastically disturbed site may change the ecological integrity of the site and the recommended seed mix.
- Loss of soil vegetation cover, biologic crusts, organic matter and productivity. With expedient reclamation, productivity, and stability should be regained in the shortest time frame.
- Soil erosion would also affect soil health and productivity. Erosion rates are site specific and are dependent on soil, climate, topography, and cover.
- Soil Compaction is the collapse of soil pores resulting in decreased infiltration and increased erosion potential. Factors affecting compaction include soil texture, moisture, organic matter, clay content and type, pressure exerted, and the number of passes by vehicle traffic or machinery. Compaction may be remediated by plowing or ripping.
- An important component of soils in Wyoming's semiarid rangelands, especially in the Wyoming big sagebrush cover type, are biological soil crusts, or cryptogamic soils that occupy ground area not covered with vascular plants. Biological soil crusts are predominantly composed of cyanobacteria, green and brown algae, mosses, and lichens. They are important in maintaining soil stability, controlling erosion, fixing nitrogen, providing nutrients to vascular plants, increasing precipitation infiltration rates, and providing suitable seed beds (BLM 2003). They are adapted to growing in severe climates; however, they take many years to develop (20 to 100) and can be easily disturbed or destroyed by surface disturbances associated with construction activities.

These impacts, singly or in combination, would increase the potential for valuable soil loss due to increased water and wind erosion, invasive/noxious/poisonous plant spread, invasion and establishment, and increased sedimentation and salt loads to the watershed system. Soil disturbances other than permanent facilities could be short term, and may have minor impacts with expedient, successful interim reclamation and site stabilization. Construction activities should be designed following Best Management Practices (BMPs), seed mixes were determined based on soil map unit types and dominant ecological sites found within the project area.

4.1.3. Water Management

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 through the use of tested casing, by setting casing at appropriate depths and by following safe repair procedures in the event of casing failure. Other down hole well operations are expected to cause minimal impacts using standard engineering practices.

4.1.4. Invasive Species

Based on the investigations performed during the project planning process, the operator has committed to the control of noxious weeds and species of concern. Weeds will be controlled on disturbed areas within

the exterior limits of the access road and well pad. The control methods shall be in accordance with guidelines established by the EPA, BLM, State, and local authorities.

4.1.5. 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.

Cumulative Effects of Surface Resources

The cumulative impacts of the proposed action, when considered with other existing and proposed development in the project area are not expected to be significant. The application of mitigative measures will ensure that the incremental impacts of these wells, when considered with any existing development are insignificant. For more information on cumulative impacts, please refer to the PRB FEIS.

4.2. Wildlife

4.2.1. Big Game

Winter-Yearlong range for pronghorn antelope and Yearlong and Winter-Yearlong range for mule deer will be impacted. This habitat would be directly disturbed with the construction of wells, pipelines and roads. 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 animals 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 and other 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.

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 4-211.

4.2.2. Aquatics

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 4-211.

4.2.3. Migratory Birds

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 con-specifics (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 consequence 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).

The cumulative effects associated with the proposed project 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.

4.2.4. Raptors

One ferruginous hawk nest (BLM #1486) is located within 0.5 miles of the project. The nest was reported gone in 2008 and 2009. Scientific studies have shown that human activities in close proximity to active raptor nests may interfere with nest productivity. Romin and Muck (1999) found that activities within 0.5 miles of a nest are prone to cause adverse impacts to nesting raptors. If project activities occur during nesting, they could be sufficient to cause adult birds to abandon 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. 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 in such a way as to provide an adequate biologic buffer for nesting raptors.

The cumulative effects associated with the proposed project 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. To reduce impact to raptors, a timing restriction from February 1-July 15 will be implemented within 0.5 miles active raptor nest.

4.2.5. Threatened and Endangered

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

Common Name (scientific name)	Habitat	Presence	Project Effects	Rationale
Endangered				
Black-footed ferret (<i>Mustela nigripes</i>)	Black-tailed prairie dog colonies or complexes > 1,000 acres.	NP	NE	Suitable habitat of insufficient size.
Threatened				
Ute ladies'-tresses orchid (<i>Spiranthes diluvialis</i>)	Riparian areas with permanent water	NP	NE	Suitable habitat is not present.
Blowout Penstemon(<i>Penstemon haydenii</i>)	Active sand dunes	NP	NE	Suitable habitat is 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

- LAA** Likely to adversely affect
- NE** No Effect.

NLAA May Affect, not likely to adversely affect individuals or habitat.

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 4-271.

4.2.5.1. Black-footed Ferret

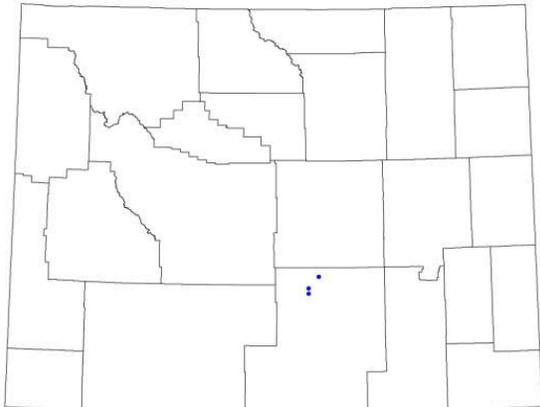
Black-footed ferret habitat is not present within the proposed project area. Because the black-tailed prairie dog colonies within and adjacent to the proposed project area are of insufficient size for supporting ferrets and are isolated from any prairie dog complexes, implementation of the proposed development will have “no effect” on the black-footed ferret.

4.2.5.2. Ute-Ladies Tresses Orchid

BLM Wildlife biologist did not observe any potential habitat within the project area, therefore a survey was not required and the proposed undertaking should have “no effect” on the Ute Ladies’-Tresses Orchid.

4.2.5.3. Blowout Penstemon

The primary vegetation around the well location is sweet clover and sage brush, no sand dunes, blowouts, or large sand deposits were identified within the well site. Therefore, blowout penstemon habitat does not exist within the project. The proposed undertaking should have “no effect” on blowout penstemon.



Wyoming distribution of *Penstemon haydenii*

4.2.6. Sensitive Species

BLM will take necessary actions to meet the policies set forth in sensitive species policy (BLM Manual 6840). BLM Manual 6840.22A states: “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 Endangered Species Act 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.”

Common Name (scientific name)	Habitat	Presence	Project Effects	Rationale
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Common Name (scientific name)	Habitat	Presence	Project Effects	Rationale
<i>Amphibians</i>				
Northern leopard frog (<i>Rana pipiens</i>)	Beaver ponds and cattail marshes from plains to montane zones.	NP	NI	Habitat not present.
Columbia spotted frog (<i>Rana pretiosa</i>)	Ponds, sloughs, small streams, and cattails in foothills and montane zones. Confined to headwaters of the S Tongue R drainage and tributaries.	NP	NI	The project area is outside the species' range, and the species is not expected to occur .
<i>Fish</i>				
Sturgeon chub (<i>Macrhybopsis gelida</i>)	Swift, rocky riffles throughout the Powder River.	NP	NI	Habitat not present.
Yellowstone cutthroat trout (<i>Oncorhynchus clarki bouvieri</i>)	Cold-water rivers, creeks, beaver ponds, and large lakes in the Upper Tongue sub-watershed	NP	NI	Habitat not present.
<i>Birds</i>				
Baird's sparrow (<i>Ammodramus bairdii</i>)	Shortgrass prairie and basin-prairie shrubland habitats; plowed and stubble fields; grazed pastures; dry lakebeds; and other sparse, bare, dry ground.	S	MIIH	Sagebrush cover will be affected.
Bald eagle (<i>Haliaeetus leucocephalus</i>)	Mature forest cover often within one mile of large water body with reliable prey source nearby.	NP	NI	Habitat not present.
Brewer's sparrow (<i>Spizella breweri</i>)	Sagebrush shrubland	S	MIIH	Sagebrush cover will be affected.
Ferruginous hawk (<i>Buteo regalis</i>)	Basin-prairie shrub, grasslands, rocky outcrops	K	MIIH	Nesting habitat may be impacted and human activities will increase
Greater sage-grouse (<i>Centrocercus urophasianus</i>)	Basin-prairie shrub, mountain-foothill shrub	S	WIPV	Sagebrush cover will be affected.
Loggerhead shrike (<i>Lanius ludovicianus</i>)	Basin-prairie shrub, mountain-foothill shrub	S	MIIH	Sagebrush cover will be affected.
Long-billed curlew (<i>Numenius americanus</i>)	Grasslands, plains, foothills, wet meadows	NP	NI	Suitable habitat not present.
Mountain plover (<i>Charadrius montanus</i>)	Short-grass prairie with slopes < 5%	NP	NI	Habitat not present.
Northern goshawk (<i>Accipiter gentilis</i>)	Conifer and deciduous forests	NP	NI	Dense forest habitat not present.
Peregrine falcon (<i>Falco peregrinus</i>)	Cliffs	NP	NI	No nesting habitat present.
Sage sparrow (<i>Amphispiza billneata</i>)	Basin-prairie shrub, mountain-foothill shrub	S	MIIH	Sagebrush cover will be affected.

Common Name (scientific name)	Habitat	Presence	Project Effects	Rationale
Sage thrasher (<i>Oreoscoptes montanus</i>)	Basin-prairie shrub, mountain-foothill shrub	S	MIIH	Sagebrush cover will be affected.
Trumpeter swan (<i>Cygnus buccinator</i>)	Lakes, ponds, rivers	NP	NI	Habitat not present.
Western Burrowing owl (<i>Athene cunicularia</i>)	Grasslands, basin-prairie shrub	NP	NI	Habitat not present.
White-faced ibis (<i>Plegadis chihi</i>)	Marshes, wet meadows	NP	NI	Habitat not present.
Yellow-billed cuckoo (<i>Coccyzus americanus</i>)	Open woodlands, streamside willow and alder groves	NP	NI	Streamside habitats not present.
<i>Mammals</i>				
Black-tailed prairie dog (<i>Cynomys ludovicianus</i>)	Prairie habitats with deep, firm soils and slopes less than 10 degrees.	NP	NI	No known colonies present.
Fringed myotis (<i>Myotis thysanodes</i>)	Conifer forests, woodland chaparral, caves and mines	NP	NI	Habitat not present
Long-eared myotis (<i>Myotis evotis</i>)	Conifer and deciduous forest, caves and mines	NP	NI	Habitat not present
Swift fox (<i>Vulpes velox</i>)	Grasslands	NP	NI	Habitat not present.
Townsend's big-eared bat (<i>Corynorhinus townsendii</i>)	Caves and mines.	NP	NI	Habitat not present.
<i>Plants</i>				
Porter's sagebrush (<i>Artemisia porteri</i>)	Sparsely vegetated badlands of ashy or tufaceous mudstone and clay slopes 5300-6500 ft.	NP	NI	Habitat not present.
William's wafer parsnip (<i>Cymopterus williamsii</i>)	Open ridgetops and upper slopes with exposed limestone outcrops or rockslides, 6000-8300 ft.	NP	NI	Project area outside of species' range.
<p>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.</p> <p>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</p>				

4.2.6.1. 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 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.

4.2.6.2. Bald eagle

The project area does not support nesting and rooting habitat for bald eagles. The proposed undertaking should have no impact on bald eagles.

4.2.6.3. Prairie Dogs

Prairie dogs are not present within the project area; therefore the proposed undertaking should have no impact on prairie dogs.

4.2.6.4. Sage Grouse

Construction of the well pad as well as access road would result primarily in the loss of non-native vegetation and increased erosion potential (Summary of 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 COAs 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 recontoured and reclaimed to its original topography.

The State Wildlife Agencies' Ad Hoc Committee for Consideration of Oil and Gas Development Effects to Nesting Habitat (2008) recommends that impacts be considered for leks within four miles of oil and gas developments. WGFD records indicate that two sage-grouse leks occur within four miles of the project area. Direct and indirect impacts to sage-grouse are discussed in more detail in the PRB FEIS on pg. 4-257 to 4-273.

To reduce impacts to sage grouse, no surface disturbing activities shall occur from March 1-June 15 for the life of the project.

The PRB FEIS (BLM 2003) states that “the synergistic effect of several impacts would likely result in a downward trend for the sage-grouse population, and may contribute to the array of cumulative effects that

may lead to its federal listing. Local populations may be extirpated in areas of concentrated development, but viability across the Project Area (Powder River Basin) or the entire range of the species is not likely to be compromised (pg. 4-270).

4.2.6.5. Sharp-tailed grouse

A BLM data base search did not show any known sharp-tailed grouse leks or suitable breeding or nesting habitat within the project area. Implementation of the proposed development will have no impact on sharp-tailed grouse.

4.2.6.6. Mountain Plover

The steep and densely vegetated terrain renders the project area unsuitable for mountain plover habitat. An analysis of direct and indirect impacts to mountain plover due to oil and gas development is included in the PRB FEIS (4-254-255). Implementation of the proposed development will have no impact on mountain plover.

4.3. Cultural Resources

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 08/31/09 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).

5. Consultation/Coordination

Contact	Title	Organization	Phone Number	Present at Onsite?
Mike Brown	Representative	H&B Consultants	307-237-9310	Yes
Jennifer Spagon	NRS	BLM	307-684-1059	Yes
Mary Hopkins	Interim Wyoming SHPO	Wyoming SHPO		No

6. Other Permits Required

A number of other permits are required from Wyoming State and other Federal agencies. These permits are identified in Table A-1 in the PRB FEIS Record of Decision.

7. References and Authorities

Code of Federal Regulations (CFR)

- 40 CFR All Parts and Sections inclusive Protection of Environment. Revised as of July 1, 2004.
- 43 CFR All Parts and Sections inclusive - Public Lands: Interior. Revised as of October 1, 2006.

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