

APPENDIX A. Conditions of Approval for Conventional Application for Permit to Drill

Jireh Federal 35-13 Alt D, supported by Environmental Assessment (EA), WY-070-EA11-270

Operator: **The Daube Company**

Field Office: Buffalo Field Office
Address: 1425 Fort Street
Buffalo, Wyoming 82834
Office Telephone Number: 307-684-1100

The spud date will be reported electronically, (see website location above) to the Authorized Officer **24 HOURS BEFORE SPUDDING**, unless otherwise required in site specific conditions of approval.

Spud Notice Site: http://www.wy.blm.gov/minerals/og/og_notices/spud_notice.php

Well List.

#	Well Name	SHL QTR	Sec	TWP	RNG	BHL Sec.	TWP	RNG
1	Jireh Federal 35-13 Alt D	NENW	2	53N	70W	35	54N	70W

NOTICE: Operator Committed Wildlife Measures for Construction, Drilling and Production as follows:

- Daube will conduct all surface disturbing and disruptive activities outside the Greater Sage-Grouse (GSG) breeding nesting season (March 15 – June 30) and will keep the removal of sagebrush to a minimum due to the Jireh Federal 35-13 ALT D DIR close proximity to 2 GSG leks. (SUPO, p. 17)
- Daube will commit to restricting travel on project access roads to between the hours of 8am - 6pm during the GSG breeding season of March 15 - May 15. (SUPO, p. 17)
- Daube will commit to scheduling maintenance activities that can be scheduled to occur outside of the GSG nesting season of March 15 – June 30 for the life of the project. (SUPO, p. 18)
- Migratory birds will be effectively excluded from all facilities that pose a mortality risk, including, but not limited to, heater treaters, flare stacks, and secondary containment where escape may be difficult or wildlife toxicants are present (BLM IM WY-2013-005). (SUPO, p. 7)
- Daube will conduct all surface disturbing activities outside the migratory bird breeding season (May 1 – July 31), unless a clearance survey has been conducted. (SUPO, p. 7)
- Daube will be responsible for assuring that any open pits that are hazardous to birds and other wildlife will be rendered not accessible to wildlife, and are in compliance with the Migratory Bird Treaty Act (BLM IM WY-2013-005). (SUPO, p. 7)
- Daube will conduct all surface disturbing and disruptive activities outside of the raptor breeding/nesting season (February 1 – July 31) within 0.5 miles of active raptor nests. (SUPO, p. 17)

SITE SPECIFIC

Surface

1. Improved roads used in conjunction with accessing Jireh Federal 35-13 Alt D well must be fully built (including all water control structures such as wing ditches, culverts, relief ditches, low water crossings, surfacing, etc.) and functional to BLM standards as outlined in the BLM Manual 9113 prior to drilling of the well.
2. A pre-construction field meeting shall be conducted prior to beginning any dirt work approved under the Jireh Federal 35-13 Alt D APD. The operator shall contact the BLM Authorized Officer NRS, Debby Green at (307)684-1058 at least 4-days prior to beginning operations so that the meeting can

be scheduled. The operator is responsible for having all contractors present (dirt contractors, drilling contractor, pipeline contractor, project oversight personnel, etc.) including the overall field operations superintendent, and for providing all contractors copies of the approved APDs, project map and BLM Conditions of Approval pertinent to the work that each will be doing. The engineered well pad and access road will be completely slope staked (cuts and fills) prior to conducting the preconstruction inspection.

3. The cut and fill slopes of the engineered pad will require erosion control methods (e.g. silt fencing, waddles, water bars, diversion ditches, etc.) to prevent surface runoff and run-on as described in the Surface Use Plan and Reclamation Plan for Jireh Federal 35-13 Alt D. All erosion control methods will be installed *prior to drilling activities taking place*.
4. Turnouts are required on all single-lane roads. Turnouts must be located at 1000-foot intervals or be intervisible, whichever is less. The length should not be less than 100 feet, with additional 50-foot transitional tapers at each end.
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 COVERT GREEN (18-0617 TPX).
6. BLM developed seed mixes for the ecological site identified within the project area based on the NRCS ecological site description, the reference plant community and desired species richness with the intent of maximizing re-vegetation potential. The operator will seed on the contour to a depth of no more than an average of 0.5 inch. To maintain quality and purity, 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:

Loamy Ecological Site Seed Mix Species	Lbs PLS*
<i>Thickspike wheatgrass (Elymus lanceolatus ssp. lanceolatus)</i>	2.5
<i>Bluebunch wheatgrass (Pseudoroegneria spicata ssp. spicata)</i>	1.5
<i>Western wheatgrass (Pascopyrum smithii)</i>	2.5
<i>Slender wheatgrass (Elymus trachycaulus ssp. trachycaulus)</i>	2.5
<i>Green needlegrass (Nassella viridula)</i>	2.0
<i>Needleandthread (Hesperostipa comata)</i>	1.5
<i>Prairie coneflower (Ratibida columnifera)</i>	0.5
<i>White or purple prairie clover (Dalea candidum, purpurea)</i>	1.0
<i>Fourwing saltbush (Atriplex canescens)</i>	1.5
<i>Gardner Saltbush (Atriplex gardneri)</i>	0.2
<i>Winterfat (Krascheninnikovia lanata)</i>	0.5
Totals	16.2 lbs/acre

7. BLM approved fluids and drilling mud must be buried within the reserve pit. Subsoil must then be replaced in the reserve pit before topsoiling. Under no circumstances would any by-products from drilling or subsoil be spread on top of topsoil.
8. Pits are to be dried within 6 months from the date the well is spud or the date of well completion and prior to any backfilling. Mechanical trenching or squeezing of pit fluids and cuttings is prohibited. Drying by any means other than natural (air) evaporation requires prior approval from the BLM. Pit solids shall be buried at least 3 feet below recountoured grade. Soils that are moisture laden and saturated, partially or completely frozen shall not be used for backfill or cover. The pit area may

require mounding to allow for settling. Before backfilling, synthetic liner portions remaining above the “mud line” shall be cut off as close to the top of the mud surface as possible and disposed of at an authorized commercial waste disposal facility. The pit bottom and remaining liner shall not be trenched, cut, punctured or perforated. Installation and operation of any sprinklers, pumps, and related equipment shall ensure that water spray or mist does not drift outside of pit boundaries.

Water

1. The operator will collect a water sample representative of the water produced from this (these) wells for analysis within 90 days of initial production. Results of the analysis will be submitted to the BLM Authorized Officer as soon as they become available. The constituents analyzed in the water quality analyses will be the same as those required by the WDEQ for WYPDES permit using approved EPA test procedures (40 CFR 136 or 40 CFR 136.5).
2. After well completion, the operator shall submit a Sundry Notice for approval of disposal of all produced water in accordance with Onshore Oil and Gas Order No. 7, Disposal of Produced Water.

Wildlife

1. Daube will adhere to all operator committed wildlife mitigation measures in the SUPO. If Daube desires to deviate from the commitments, then it must submit an exception request to the BLM-BFO.

Greater Sage-Grouse (GSG)

1. For any surface-disturbing activities proposed in sagebrush shrublands, the operator will conduct clearance surveys for GSG breeding activity during the GSG’s breeding season before initiating the activities. The surveys must encompass all sagebrush shrublands within 0.5 miles of the proposed surface disturbance activities. This will apply to all proposed or approved surface disturbances. All survey results shall be submitted in writing to a Buffalo BLM biologist no later than July 31 of the current year. This condition will be implemented on an annual basis for the duration of surface disturbing activities. If a previously unknown lek is identified during surveys (April 1-May7), a Buffalo BLM biologist shall be notified.

Raptors

1. If an undocumented raptor nest is located during project construction or operation, the Buffalo Field Office (307-684-1100) shall be notified within 24 hours.

STANDARD

General

1. If any cultural values [sites, artifacts, human remains (Appendix L FEIS and ROD)] 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 5 working days, weather permitting, to determine the appropriate action 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 Debby Green, Natural Resource Specialist, at (307) 684-1100, BLM, Buffalo, if there are any questions concerning the following surface use COAs.

DRILLING AND PRODUCTION OPERATIONS

1. **Verbal notification shall be given to the Authorized Officer at least 24 hours before formation tests, BOP tests, running, and cementing casing, and drilling over lease expiration dates. Contact: Supervisory Petroleum Engineering Technician, Gary Roth at 307-217-0741 or Supervisory Petroleum Engineering Technician, Jerry Walker at 307-217-0746.**
2. New hard-band drill pipe shall not be rotated inside any casing. Hard-band drill pipe shall be considered new until it has been run at least once.
3. All Blow Out Prevention Equipment tests shall include a 5 minute low pressure test between 250 psi and 500 psi with no drop in pressure with the only exception being the chokes. The chokes are only required to have the high pressure test held for a minimum length of time necessary to verify their functional integrity.
4. All operations must be conducted in accordance with all applicable laws and regulations: with the lease terms, Onshore Oil and Gas Orders, NTLs; and with other orders and instructions of the Authorized Officer, unless a variance has been granted in writing by the Authorized Officer.
5. The Operator shall install an identification sign consistent with the requirements of 43 CFR 3162.6 immediately upon or before the completion of the well pad construction operations.
6. All Blow Out Prevention Equipment rated 5M or greater shall be isolated from the casing and tested to stack working pressure. All Blow Out Prevention Equipment tests shall be performed by a suitable test pump, not the rig-mud pumps and recorded on a chart. The chart shall be submitted to the Buffalo Field Office.
7. Low test on Blow Out Prevention Equipment shall be performed and passed before moving onto the high test for each component.
8. If there are indications of inadequate primary cementing of the surface, intermediate, or production casing strings; such as but not limited to no returns to surface, cement channeling, fallback or mechanical failure of equipment, the operator will evaluate the adequacy of the cementing operations. This evaluation will consist of running a cement bond log (CBL) or an alternate method approved by the Authorized Officer (AO) no sooner than 12 hours and no later than 24 hours from the time the cement was first pumped.

9. If the evaluation indicates inadequate cementing, the operator shall contact a BLM Buffalo Field Office Petroleum Engineer for approval of remedial cementing work.
10. The adequacy of the remedial cementing operations shall be verified by a cement bond log (CBL) or an alternate method approved by the Authorized Officer (AO). All remedial work shall be completed and verified prior to drilling out the casing shoe or perforating the casing for purposes other than remedial cementing.
11. The cement mix water used must be of adequate quality so as not to degrade the setting properties of the cement. Any water that does not meet municipal quality water standards shall be tested by mixing the water and cement in a lab and comparing the results to the municipal quality water mix results. If the results show that the cement qualities are not the same or greater, than the non-municipal water shall not be used for mixing cement in the well.
12. All oil and gas operations shall be conducted in a manner to prevent the pollution of all freshwater resources. All fresh waters and waters of present or probable future value for domestic, municipal, commercial, stock or agricultural purposes will be confined to their respective strata and shall be adequately protected. Special precautions will be taken to guard against any loss of artesian water from the strata in which it occurs and the contamination of fresh water by objectionable water, oil, condensate, gas or other deleterious substance to such fresh water.
13. Any changes to the approved drilling plan and/or these conditions of approval shall be approved by the BLM-Buffalo Field Office Petroleum Engineer prior to being implemented. After hour's numbers: Petroleum Engineer: Matthew Warren Cell Telephone: 307-620-0103.

Construction

1. 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.
2. 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.
3. 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.
4. Construct the backslope no steeper than ½:1, and construct the foreslope no steeper than 2:1, unless otherwise directed by the BLM Authorized Officer.
5. 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.
6. All overhead electrical power lines on federal surface will be constructed to the Avian Power Line Interaction Committee (2005, 2006) standards to minimize electrocution potential to birds of prey.
7. 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.

8. 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.
9. The reserve pit will be constructed so that at least half of its total volume is in solid cut material (below natural ground level).
10. 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.
11. The minimum diameter for culverts will be 18 inches. However, all culverts will be appropriately sized in accordance with standards in BLM Manual 9113.
12. Construction and other project-related traffic will be restricted to approved routes. Cross-country vehicle travel will not be allowed.
13. Maximum design speed on all operator constructed and maintained roads will not exceed 25 miles per hour.
14. 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.
15. Pipeline trenches shall be compacted during backfilling. Pipeline trenches shall be routinely inspected and maintained to ensure proper settling, stabilization and reclamation.
16. 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.
17. 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.
18. 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 project Surface Use Plan.

Operations/Maintenance

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

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. Sewage shall be placed in a self-contained, chemically treated porta-potty on location.
6. 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.
7. 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.
8. 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
 - excess chemicals or chemical rinsate
 - empty paint, pipe dope, chemical or other product containers
 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.
9. 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.

DryHole/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 to 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 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:

<u>Slope (percent)</u>	<u>Spacing Interval (feet)</u>
less than 2	200
2 – 4	100
4 – 5	75
greater than 5	50

7. 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.
8. The operator must submit a Notice of Intent to Abandon and a Subsequent Report of Abandonment for abandonment approval.
9. 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.
10. Soil fertility testing and the addition of soil amendments may be required to stabilize some disturbed lands.
11. Any mulch utilized for reclamation needs to be certified weed free.

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 recontouring pit area. The operator will be responsible for recontouring 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-3A 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 project, 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.

APPENDIX B. Tables

Table B.1. Location of Discussion of the No Action Alternative in the PRB FEIS.

Resource		Type of Effect	Page(s) of PRB FEIS
Project Area Description	Geologic Features and Mineral Resources	Direct and Indirect Effects	4-129 and 4-134
		Cumulative Effects	4-129 and 4-134
Soils, Vegetation, and Ecological Sites	Soils	Direct and Indirect Effects	4-150
		Cumulative Effects	4-152
	Vegetation	Direct and Indirect Effects	4-163
		Cumulative Effects	4-164
	Wetlands/Riparian	Direct and Indirect Effects	4-178
		Cumulative Effects	4-178
Wildlife	Sensitive Species - Greater Sage-Grouse	Direct and Indirect Effects	4-271
		Cumulative Effects	4-271
	Migratory Birds	Direct and Indirect Effects	4-234
		Cumulative Effects	4-235
	Big Game	Direct and Indirect Effects	4-186
		Cumulative Effects	4-211
	Raptors	Direct and Indirect Effects	4-224
		Cumulative Effects	4-225
Water	Groundwater	Direct and Indirect Effects	4-63
		Cumulative Effects	4-69
	Surface Water	Direct and Indirect Effects	4-77
		Cumulative Effects	4-69
Economics and Recovery of CBNG Resources		Direct and Indirect Effects	4-362
		Cumulative Effects	4-370
Cultural Resources		Direct and Indirect Effects	4-286
Air Quality		Direct and Indirect Effects	4-386
		Cumulative Effects	4-386
Visual Resources		Direct and Indirect Effects	4-313
		Cumulative Effects	4-314

Table B.2. Affected General Resources Worksheet (NA: not applicable)

Resource	Resource Present	Resource Affected	PRB FEIS Sufficient	Notes
Air Quality	Yes	Yes	Yes	See PRB FEIS 3-291, 3-298, 4-404 to 4-406, 4-377, & 4-386
Cultural				See PRB FEIS 3-206, 3-228, 4-273, 4-287, & 4-394
Native American religious concerns	Yes	Yes	No	PBTCP & PRB FEIS 3-228, 4-227; address in EA
Traditional Cultural Properties	Yes	Yes	No	PBTCP; address in EA
Mineral Potential				See PRB FEIS 3-66, 3-70, 3-230, 4-127 to 4-129
Coal	No	No	Yes	See PRB FEIS 3-66
Fluid Minerals	Yes	Yes	Yes	See PRB FEIS 3-68 and 3-69
Locatable Minerals	Yes	Yes	No	Address in EA
Other leasables	Yes	No	NA	
Salable minerals	Yes	No	NA	
Paleontology				
PFYC 3	Yes	Yes	Yes	See PRB FEIS 3-65-66, 4-125 to 4-127
PFYC 5	No	No	NA	
Rangeland Management	Yes	No	NA	

Resource	Resource Present	Resource Affected	PRB FEIS Sufficient	Notes
Existing range improvements	No	No	NA	
Proposed range improvements	No	No	NA	
Recreation				See PRB FEIS 3-263, 3-273, 4-319 to 4-328
Developed site	No	No	NA	See PRB FEIS 3-266 and 4-326
Walk-in-Area (2009 data)	No	No	NA	
Social & Economic	Yes	Yes	No	See PRB FEIS 3-275-3-289, 4-336 to 4-370; see EA
Soils & Vegetation	Yes	Yes	No	See PRB FEIS 3-80-3-107, 4-134-4-152, 4-153-4-164, 4-343-4-391, and 4-406; address in EA
Erosion Hazard	Yes	Yes	No	See PRB FEIS 3-82 and 4-35; address in EA
Poor Reclamation Potential	Yes	Yes	No	Address in EA
Slope hazard	Yes	Yes	No	See PRB FEIS 3-81, and 4-135; address in EA
Forest products	No	No	NA	
Invasive Species	Yes	Yes	No	See PRB FEIS 3-103-3-108, and 4-153; see EA
Wetlands/Riparian	Yes	Yes	No	See PRB FEIS 3-108-3-111, 4-172-4-178, 4-406, and 4-395 through 4-396; address in EA
Special Designations				
Proposed ACEC	No	No	NA	
Wild & Scenic River	No	No	NA	See PRB FEIS 3-273
Wilderness Characteristics/Citizen Proposed	No	No	NA	
WSA	No	No	NA	
Visual Resources				
Class II	No	No	NA	
Class III	Yes	Yes	Yes	See PRB FEIS 3-252-3-263, 4-302-4-314, & 4-403
Water				See PRB FEIS 3-1-3-56, 4-1-4-122, 4-135, 4-393, & 4-405
Floodplains	Yes	No	NA	
Groundwater	Yes	Yes	No	See PRB FEIS 3-1-3-30, 4-1-4-69, 4-392, & 4-405; see EA
Surface water	Yes	Yes	No	See PRB FEIS 3-36-3-56, 4-69-4-122, 4-393, & 4-405; see EA
Drinking water	Yes	No	Yes	See above PRB FEIS "Water" references
Wildland Urb Interface	No	No	NA	
Wildlife				
ESA listed, proposed, or candidate species	Yes	Yes	No	Sage-grouse would be affected by this proposal: require thorough analysis of effects including cumulative effects
BLM sensitive species	Yes	Yes	Yes	See attached sensitive species wildlife checklist
General wildlife	Yes	Yes	No	Nesting raptor site-specific effects
Aquatic species	No	No	NA	
Upland game birds	Yes	No	NA	
West Nile virus potential	Yes	No	NA	

Table B.3. Special Status (Sensitive) Species (SSS) Worksheet

Common Name	Habitat	Presence? ¹	Direct Impacts Anticipated?	Intend to apply COA?	Direct, indirect, and / or cumulative impacts anticipated beyond those in the PRB FEIS?
Amphibians					4-258
Northern leopard frog	Beaver ponds & cattail marshes from plains to montane zones	NP	No	No	No
Columbia spotted frog	Confined to headwaters of the S Tongue R drainage	NP	No	No	No
Fish					4-259 & 4-260
Yellowstone cutthroat trout	Cold-water rivers, creeks, beaver ponds, & large lakes in Upper Tongue sub- watershed	NP	No	No	No
Birds					4-260 to 4-264
Baird's sparrow	Shortgrass prairie and basin-prairie shrubland habitats; plowed and stubble fields; grazed pastures; dry lakebeds; and other sparse, bare, dry ground	NP	No	No	No
Bald eagle	Mature forest cover often within 1 mile of large water body with reliable prey source nearby	NS	No	No	No, PRB FEIS 4-251 to 4-253 & BA; see EA
Brewer's sparrow	Sagebrush shrubland	K	No	No	No, but new MBTA MOU applies
Ferruginous hawk	Basin-prairie shrub, grasslands, rock outcrops	NS	No	Yes, Raptor COA	No, but new MBTA MOU applies
Loggerhead shrike	Basin-prairie shrub, mountain-foothill shrub	NS	No	No	No, but new MBTA MOU applies
Long-billed curlew	Grasslands, plains, foothills, wet meadows	NP	No	No	No
Northern goshawk	Conifer and deciduous forests	NP	No	Yes, Raptor COA	No
Peregrine falcon	Cliffs	NP	No	Yes, Raptor COA	No
Sage sparrow	Basin-prairie shrub, mountain-foothill shrub	NS	No	No	No, but new MBTA MOU applies
Sage thrasher	Basin-prairie shrub, mountain-foothill shrub	NS	No	No	No, but new MBTA MOU applies
Trumpeter swan	Lakes, ponds, rivers	NP	No	No	No
Western Burrowing owl	Grasslands, basin-prairie shrub	NS	No	Yes, Raptor COA	No
White-faced ibis	Marshes, wet meadows	NP	No	No	No
Yellow-billed cuckoo	Open woodlands, streamside willow and alder groves	NS	No	No	No
Mammals					4-264 & 4-265
Black-tailed prairie dog	Prairie habitats with deep, firm soils & slopes < 10 degrees	K	Yes	No	No, PRB FEIS 4-255, 4-256; address in EA
Fringed myotis	Conifer forests, woodland chaparral, caves and mines	NS	No	No	No
Long-eared myotis	Conifer and deciduous forest, caves and mines	NS	No	No	No
Spotted bat	Cliffs over perennial water	NP	No	No	No
Swift fox	Grasslands	K	No	No	No, Address in EA;den

Common Name	Habitat	Presence? ¹	Direct Impacts Anticipated?	Intend to apply COA?	Direct, indirect, and / or cumulative impacts anticipated beyond those in the PRB FEIS?
					site within 10 miles
Townsend's big-eared bat	Caves and mines	NP	No	No	No
Plants					4-258
Limber pine	Mountains, associated with high elevation conifer species	NP	No	No	No
Porter's sagebrush	Sparsely vegetated badlands of ashy or tuffaceous mudstone and clay slopes 5,300-6,500 feet	NP	No	No	No
William's wafer parsnip	Open ridgetops and upper slopes with exposed limestone outcrops or rockslides, 6,000-8,300 feet	NP	No	No	No

¹ **Key:** **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.

Table B.4. Non-designated Wildlife Worksheet

Common Name / Group	Presence? ¹	Direct Impacts Anticipated?	Intend to apply COA?	Direct, indirect, and/or cumulative impacts anticipated beyond the level analyzed within the PRB FEIS?
Big Game	K	No	No	No, PRB FEIS 4-181 to 4-215
Aquatics	NP	No	No	No, PRB FEIS 4-235 to 4-249
Migratory Birds	K	No	No	No, PRB FEIS 4-231 to 4-235; MBTA MOU applies
Raptors	K	Yes	Yes	No, PRB FEIS 4-216 to 4-221; MBTA MOU applies
Plains Sharp-tailed Grouse	NS	No	No	No, PRB FEIS 4-221 to 4-226