

# **BLM Site-Specific Conditions of Approval Black Hills Plateau Production, LLC DeBeque Exploratory Proposal**

The following measures are required by the BLM:

## **Soils**

- Areas proposed for disturbance with slopes greater than 40 percent shall be evaluated during an on-site inspection (for proposed well pads HDU 24-11, WT 12-16, DC 1-13, HSC 5-16, HSC 1-20, HSC 1-22) and might require relocation.
- Exposed rock outcrops present in pipeline corridors or on proposed well pad locations shall be removed intact, as possible (salvaging large pieces from the outcrop), and replaced on the ground surface at the margins of the corridor and/or as close to the original location as practical.

## **Water Resources**

- Well pad HDU 17-43 would incorporate existing Maralex pad SSR 9-7. Black Hills would cap and dismantle the existing Maralex well and infrastructure. The existing road to SSR 9-7 would be reclaimed and culvert removed. All disturbance and permanent BMPs shall be at a horizontal distance of least 30 feet from the adjacent stream and the pad and BMP disturbances shall be located outside the steep slopes forming the drainage.
- Well pad HDU 9-41 would be located on a level to gently sloping area adjacent to Garfield CR 200 and would require a new short access spur from an existing spur road. The pad shall be located to avoid affecting an ephemeral drainage to the west side and rainfall-driven sheet flow from the north shall be managed with BMPs.
- Well pad HDU 9-11 would be located on a level to gently sloping area in a similar topographic area, again adjacent to Garfield CR 200. It would require a new short access spur road. Again, storm water sheet flow from the north would be controlled with BMPs.
- Well pad HDU 7-23 is proposed adjacent to existing Maralex well pad SSR 10-7, off Garfield CR 222. The area where the pad is proposed is relatively flat, on a bench above and just south of the intermittent stream South Dry Fork. Small, ephemeral tributaries cross the proposed pad disturbance as they run toward the stream. One such drainage consists of an unvegetated erosional feature developing from a head-cut. It runs north rather than east-northeast, as do the other ephemeral tributaries. None of these ephemeral drainages has any notable catchment area above it. As drawn by the surveyor, the closest point of disturbance relative to the stream would be about 85 feet. However, Black Hills and the BLM would require that at least 100 feet of vegetated and undisturbed ground remain between the creek and any project disturbance. New pad disturbance would stay as near to adjacent Maralex pad SSR 10-7 as possible. The existing access road that would serve both pads would be improved, especially at the existing low water crossing of South Dry Fork. Black Hills would design and engineer a box culvert or bridge to cross South Dry Fork where the access road crosses it. It would be designed to manage at least a 50-year storm event. If a box culvert design was selected, a spillway to carry water and debris over it, for larger than 50-year storm events would be included in the design so that debris and water could flow over the culvert without it jamming and creating additional sediment. A Nationwide permit with the

USACE would be required. The BLM hydrologist and Black Hills discussed and agreed to this at the on-site inspection on July 24, 2012.

- Well pad WF 10-31-99 is proposed adjacent to Mesa County V.2 Road and a man-made canal diverting intermittent flow from the north to the BLM range improvement Soap Reservoir, where livestock and wildlife come to drink. Also adjacent is a drainage flowing intermittently into BLM's Winter Flats Pond. Neither canal would be expected to be affected by the proposed pad construction and operation. The site-specific SWMP and BMPs help to minimize any impact from surface flow to the ponds.
- If hydrostatic test water or trench dewatering water is discharged, it shall be discharged to an upland area at least 150 feet from WoUS and wetlands, in a manner so that it would infiltrate into the ground without causing erosion. BLM approval of the discharge location and proposed BMPs shall be obtained before discharging hydrostatic test water to an upland area.
- Pipeline construction across ephemeral and intermittent drainages shall occur when no flowing water is present.
- Drainages and drainage patterns shall be evaluated before or during on-site inspections for proposed well pads HDU 24-11, WT 12-16, DC 1-13, HSC 5-16, HSC 1-20 and HSC 1-22. Well pad locations and orientations shall be adjusted to minimize effects to drainages and water flow.
- A box culvert or bridge shall be engineered and installed for the South Dry Fork crossing along the well pad HDU 7-23 access road. The design shall pass a 50-year event and withstand the 100-year flood event. For the box culvert, a spillway shall be included so debris and water could flow over the culvert without creating additional sediment, in case of a major water event.
- For proposed well pads HDU 9-41, HDU 9-11 and HDU 7-23, baseline water quality data shall be collected in Dry Fork of Roan Creek (or shallow well such as a sand point) specifically looking for TPH, BTEX and VOCs. At the time of APD submission, Surface Use Plans of Operation (SUPOs) shall also indicate that the baseline water quality will be collected. Baseline samples shall be collected during low flow periods (e.g., late fall) prior to construction. Analytical parameters shall include: pH, alkalinity, specific conductance, major cations/anions chloride, fluoride, sulfate, sodium, BTEX compounds, TPH, polycyclic aromatic hydrocarbons (PAHs) (including benzo(a)pyrene), metals (arsenic, barium, calcium, chromium, iron, magnesium and selenium). Follow-up sampling shall occur within 6 to 12 months from the start of drilling. Subsequent samples shall be collected between 60 to 72 months of completion. Permits shall be obtained through the State of Colorado for monitoring wells. Data shall be provided directly to the BLM from the laboratory conducting the analysis (see COGCC rule 609 and amended rule 318A.e.(4)).
- Black Hills shall fund the installation, observation and maintenance of a real-time stream gaging station (USGS operated gage preferable) installed below the proposed diversion on Dry Fork of Roan Creek. The following represent limiting volumes:
  - 1.4 cubic feet per second from March 1 through May 31. This creek experiences consistently low flows during late summer and fall, so it is important to protect as much physical habitat as possible during the limited time when snow melt runoff flows are available.

- 1.2 cubic feet per second from June 1 to November 30. This flow rate is capable of maintaining pool habitat in the creek and preventing excessively high temperatures.
- 1.05 cubic feet per second from December 1 to February 28. This flow rate shall provide sufficient flow to prevent pools from freezing and protect overwintering fish.
- Store and stage emergency spill response equipment at strategic locations along perennial water courses so that it is available to expedite effective spill response.
- Avoid locating staging, refueling and storage areas within 300 feet of any reservoir, lake, wetland, or natural perennial or seasonally flowing stream or river.
- Avoid constructing any road segment in the channel of an intermittent or perennial stream.
- Avoid low water crossings. Structures for perennial or intermittent stream channel crossings shall be engineered using bridges or appropriately sized culverts.
- Pipelines that cross perennial, intermittent and ephemeral stream channels shall be constructed to withstand floods of extreme magnitude to prevent rupture and accidental contamination of runoff during high flow events. Methods and analysis outlined in BLM technical note 423-Hydraulic Considerations for Pipelines Crossing Stream Channels (DOI, 2007) shall be closely followed to prevent undesirable events.
- A copy of the SPCC Plan shall be provided to the BLM with the APD submittal.

#### **Noise**

- Construction shall occur during daytime hours when there is less sensitivity to sound.
- All equipment shall have sound control devices no less effective than those provided by the manufacturer. All equipment shall have muffled exhausts.
- If necessary, for greater noise reduction, moveable paneled noise shields, barriers, or enclosures shall be installed adjacent to or around noisy equipment where required to meet the project noise limits. Temporary barriers can result in a noise reduction of up to 10 dBA at the receptor.
- Generator(s) serving drilling rigs shall be installed and operated at the site in a manner that, at a minimum, meets the COGCC's Noise Abatement regulation (No. 802) for Residential/Agricultural/Rural Zone. This regulation requires that the noise level not exceed 50 dbA.
- The use of engine braking by trucks shall not be allowed on BLM roads.

#### **Invasive Non-Native Species**

- Weed treatments shall be limited to spot treatments within areas with sensitive plant species subject to site-specific pre-approval by the BLM.

#### **Vegetation**

- Berms of topsoil shall be placed around well pad perimeters to keep appropriate seed banks segregated and leave them to be replaced in the spatial context from which they were removed during pad construction.

- Exclusion fencing shall be erected along the revegetated pipeline and road disturbance in highly vulnerable areas (i.e., along stream banks) to exclude livestock, accelerate reclamation of surface disturbances and minimize weed infestations, until monitoring determines that reclamation is successful. The BLM would determine areas for potential exclusion.
- Within areas used for livestock grazing, salt licks and water tanks, where animals congregate, shall be placed away from the revegetated disturbance, to reduce livestock use of reclaimed areas and increase the likelihood for successful reclamation.

## **Wetlands**

- The proposed gathering pipelines in the Horseshoe Canyon Unit that are adjacent to the existing pond shall be moved to avoid effects to associated wetlands. Or pipeline disturbance width shall be reduced to 30 feet from the edge of the existing road to avoid or minimize effects to wetlands associated with the pond. Prior BLM approval shall be required.
- To avoid direct effects to two wetlands adjacent to the proposed gathering pipelines in the Homer Deep Unit, the pipeline corridor width shall be reduced. At the time of APD submission, the SUPO shall include this reduction of pipeline disturbance.
- In areas that have not been previously surveyed, a monitor shall be on site during pipeline routing to identify potential wetlands and avoid, if feasible.
- Riparian canopy or stream bank vegetation shall not be removed, where possible.
- Woody debris should be retained as much as possible during in-stream construction.
- A wetland delineation shall be conducted for the following wetlands if they cannot be avoided; and appropriate permits from the USACE shall be obtained.
- To minimize effects to vegetation in riparian zones adjacent to creeks and drainages crossed by or near the proposed gathering pipelines, the proposed disturbance width shall be reduced and the following measures shall be implemented and included in the APD at the time it is submitted:
  - The construction corridor and ROW width at perennial and intermittent stream crossings shall be reduced to 30 feet to reduce impacts to riparian zones along these systems.
  - Pre-construction inspections shall include on-the-ground review of installed pre-construction Storm Water BMPs and limit-of-disturbance staking, especially where pipeline construction could affect drainages or riparian systems.
  - Equipment bridges and mats shall be used where soils are saturated, to minimize compaction of soils and subsequent stream bank erosion.
  - Grading shall be minimized to the pipeline trench areas. Woody vegetation (shrubs and trees) shall be shredded or cut at ground level to facilitate riparian reestablishment from existing root systems. Such measures to facilitate rapid and successful reclamation would also minimize sedimentation.
  - Topsoil shall be salvaged and segregated and redistributed as part of seedbed preparation.
  - Site-specific riparian appropriate species plantings, BMPs and restoration techniques shall be implemented as needed.

Project Component	Wetland Description	Proximity to Proposed Action	Location	
			Latitude	Longitude
<b><i>Homer Deep Area</i></b>				
Proposed Gathering Line	One fringe wetland (2012) along ditch approximately 6 - 12 inches wide; sedges present.	Adjacent to proposed pipeline corridor.	39.375115	-108.318406
Proposed Gathering Line	One fringe wetland (2012) along ditch approximately 12 inches wide; sedges present.	Proposed pipeline crosses ditch.	39.375772	-108.319123
Proposed Gathering Line	One deep fringe wetland (2012) approximately 12 to 18 inches each side of Dry Fork with coyote willow, reed canary grass, common reed and rushes present.	Proposed pipeline crosses unnamed tributary to Dry Fork.	39.378586	-108.35371
Proposed Gathering Line	One possible wetland on each side of Dry Fork (2012).	On edge of proposed pipeline corridor.	39.379107	-108.341645
Proposed Gathering Line/ Existing Access Road	One pond (2009).	Approximately 30 feet downgrade of existing road to HDU 24-11; opposite side of proposed pipeline disturbance.	39.35142	-108.290287
<b><i>Horseshoe Canyon Area</i></b>				
Proposed Gathering Line/ Existing Access Road	Old stock pond (2012) with cattails and two young cottonwoods.	Edge of road to HSC CF#1; opposite side of existing road as proposed pipeline corridor.	39.265531	-108.221668
Proposed Gathering Line/ Existing Access Road	Pond (2012) with cattails.	Edge of pipeline corridor to HSC CF#1.	39.249486	-108.217639
<b><i>Temporary Surface Water Line</i></b>				
Mesa County V.2 Road	One wetland (2012) at mouth of wash, approximately 4 meters wide; cockleburrs present.	Edge of Mesa County V.2 Road on opposite side of the proposed surface pipeline.	39.296096	-108.315565

- Riparian tree saplings such as cottonwoods and box elders with a diameter at breast height of 1 inch or greater shall not be removed.
- Construction of stream crossings shall take place during low flow to reduce potential impacts to the riparian zone.

### **ESA and Sensitive Animal Species**

- Temporary fencing shall be installed on the open sides of the fluid pits prior to drilling. The temporary fencing shall be replaced with more permanent fence, as discussed above.
- If water is extracted from within critical habitat, extraction procedures shall follow conservation measures to qualify for ESA section 7 consultation compliance under the 2008 PBO including, but not limited to the following conservation measures:
  - Screening of pump intakes with ¼ inch (or finer) mesh;
  - Placing the pump intake into faster moving water;
  - Pumping from off-channel locations without a connection to the river.
- Pipelines shall not cross the Colorado River.
- No riparian vegetation shall be affected within the 100-year floodplain of the Colorado River.
- Water shall not be withdrawn from a Colorado Department of Transportation (CDOT) pond near Interstate-70 that is used as rearing habitat for razorback suckers.

### **ESA and Sensitive Plant Species**

- A biological monitor approved by the BLM shall be on-site during all ground-disturbing activities, including installation of conservation measures identified in the attached maps to ensure effects to ESA-listed plants are minimized as much as possible. Areas requiring monitors will at least include activities within 100 meters of Colorado hookless cactus plants and 200 meters of DeBeque phacelia suitable habitat.
- An existing cable-and-post fence shall be extended along the access route to proposed well pad HDU 17-43 to protect a high density of Colorado hookless cactus plants that have been documented in close proximity to the existing access road. Posts shall be capped or filled to mitigate risks to birds.
- Colorado hookless cactus surveys conducted outside of the flowering season shall be resurveyed during the 2013 flowering season within the staked well pad and pipeline disturbance limits and prior to ground-disturbing activities, to confirm absence of cacti.
- A select number of sites with Colorado hookless cactus and/or DeBeque phacelia shall be monitored within varying distances of proposed disturbance every 5 years throughout the life of the project, or at other recommended frequency as determined by monitoring results. The monitoring sites would help to determine long-term effects of the Proposed Action on the ESA-plants and/or habitat, determine effectiveness of conservation measures for future development and develop adaptive conservation measures.
  - The selection of sites to be monitored, and the identification of control sites shall be coordinated with the FWS.
  - Sample plots shall be photographed 1) prior to disturbance, 2) every 5 years after disturbance and 3) at the end of the proposed project (estimated to be 20 years).

- Plants at each site shall be counted, if present and the health and status of the plants and habitat shall be documented.
- A monitoring report shall be submitted to the BLM and the FWS by December 1 of each monitoring year.
- Within the Horseshoe Canyon area, the pipeline disturbance width shall be reduced to minimize the number Naturita milkvetch plants removed during pipeline construction. This shall be included in the APD at the time of submission.
- Before and after construction of proposed well pad DC 1-13, the documented locations of Naturita milkvetch shall be monitored within the disturbance footprint and within 20 meters of the proposed well pad to determine if conservation measures shall be adapted to minimize construction effects. Monitoring shall occur for 3 years after final well pad reclamation.

#### Colorado Hookless Cactus

- No individuals shall be directly affected by project activities.
- Well pads, centralized facilities, and new roads shall all be kept further than 20 meters from individual hookless cacti.
- In areas where listed plants occur, buried pipelines shall be co-located with existing roads or existing pipeline corridors. This minimizes fragmentation of undisturbed habitats, but can at times lead to the burial of a pipeline closer than 20 meters to a hookless cactus. However, in those cases the pipeline shall be buried on the other side of the existing disturbance to maximize the distance between the pipeline and hookless cactus.
- In a few cases within the project area hookless cacti are growing on both sides of an existing road. Where a proposed pipeline follows such an existing road, it shall be placed underneath the road surface, rather than to one side.
- No surface-disturbing activities would occur within 100 meters of Colorado hookless cactus plants during the cactus flowering season (April through May) to minimize indirect effects (dust, etc.) to pollinators and cactus reproduction.
- Silt barriers and fugitive dust control (watering roads and surface disturbance; no additives) measures shall minimize effects to cactus within 100 meters of existing disturbance that could result from an increase in traffic and construction-related activities.
- Temporary fencing near occupied habitats shall be installed prior to project development to prevent trampling by workers or equipment. Fencing shall be removed immediately after project activities are complete.
- Permanent deterrent fencing constructed of pipe and cable shall be installed along existing roads used for the project where hookless cacti are very close to the road to prevent vehicles from leaving the road and incidentally damaging any plants or their habitats. Posts shall be capped or filled to mitigate risks to migratory birds.
- Implementation of a SWMP and installation of hay wattles shall minimize or avoid altering hydrologic conditions within 20 meters of documented hookless cactus plants.
- Application of the BLM's Noxious and Invasive Weed Management Plan for Oil and Gas Operators should minimize or avoid the introduction or increase in noxious weed species that could compete with the Colorado hookless cactus. Herbicides shall not be used to

control weeds within 100 meters of Colorado hookless cactus plants unless approved by BLM. Noxious weeds closer to Colorado hookless cactus plants shall be removed by hand prior to soil disturbance to reduce reestablishment and potential re-distribution of weed seed and/or propagules.

- Colorado hookless cactus plants growing within 20 meters of project activities shall be monitored annually for a minimum of 3 years after ground-disturbing activities. Additionally, select sites shall be monitored every 5 years throughout the life of the project (estimated to be 20 years) to determine long-term effects, if any, on hookless cactus survival and recruitment near the project. Monitoring results shall be presented to both the BLM and the FWS.

#### DeBeque Phacelia

- No individuals shall be directly affected by project activities.
- Well pads, centralized facilities, and new roads shall all be kept further than 100 m from individual DeBeque phacelia plants and suitable habitats.
- In areas where DeBeque phacelia plants or its suitable habitat occurs, buried pipelines shall be co-located with existing roads or existing pipeline corridors. This minimizes fragmentation of undisturbed habitats. However, in one instance this would lead to the burial of a pipeline closer than 20 meters to a patch of occupied DeBeque phacelia habitat and a few other instances closer than 20 meters to patches of suitable habitat (occupancy unknown). In those cases, and other cases where DeBeque phacelia plants or suitable habitats are not quite as close to existing disturbance yet within 100 meters, the pipeline shall be buried on the other side of the existing disturbance to maximize the distance between the pipeline and DeBeque phacelia plants and suitable habitats.
- In a few cases within the project area, suitable DeBeque phacelia habitats are found on both sides of an existing road. Where a proposed pipeline follows such an existing road, it shall be placed underneath the road surface, rather than to one side.
- No surface-disturbing activities would occur within 200 meters of DeBeque phacelia suitable habitat during the growing/flowering season (April through June).
- Areas within 100 meters of suitable habitat planned for well pads and associated project components, which have not yet been surveyed in a reliable year, shall have botanical surveys prior to ground-disturbing activities.
- Silt barriers and fugitive dust control (watering roads and surface disturbance; no additives) measures shall minimize effects to DeBeque phacelia within 100 meters of existing disturbance that could result from an increase in traffic and construction-related activities.
- Temporary fencing near occupied habitats shall be installed prior to project development to prevent trampling by workers or equipment. Fencing shall be removed immediately after project activities are complete.
- Permanent deterrent fencing constructed of pipe and cable shall be installed along existing roads used for the project where DeBeque phacelia or its suitable habitats are very close to the road to prevent vehicles from leaving the road and incidentally damaging any plants or their habitats. Posts shall be capped or filled to mitigate risks to migratory birds.
- Implementation of a SWMP and installation of hay wattles would minimize or avoid altering hydrologic conditions within 20 meters of DeBeque phacelia habitats.

- Application of the BLM's Noxious and Invasive Weed Management Plan for Oil and Gas Operators would minimize or avoid the introduction or increase in noxious weed species that could compete with the DeBeque phacelia. Herbicides shall not be used to control weeds within 200 meters of DeBeque phacelia suitable habitat unless approved by the BLM. Noxious weeds closer than 200 meters to DeBeque phacelia suitable habitat shall be removed by hand prior to soil disturbance to reduce reestablishment and potential redistribution of weed seed and/or propagules.
- DeBeque phacelia habitats within 100 meters of project activities would be monitored annually for a minimum of 3 years after ground-disturbing activities. Additionally, select sites shall be monitored every 5 years throughout the life of the project (estimated to be 20 years) to determine long-term effects, if any, on DeBeque phacelia survival and recruitment, and habitat suitability, near the project. Monitoring results shall be presented to both BLM and the FWS.

### **Migratory Birds**

- Full raptor surveys shall be conducted for any intensive activities occurring more than two nesting seasons after the last survey.

### **Wildlife**

- All equipment used within drainages shall be sanitized appropriately per CPW protocols including water extraction equipment that may be utilized in one waterway and transferred to another waterway.
- Stream crossings (both ephemeral and perennial) shall not impede aquatic wildlife migration.
- Any roads and/or pipelines constructed in drainages shall not impede migration of aquatic wildlife.
- The box culvert or bridge proposed for well pad HDU 7-23 shall be designed to cross South Dry Fork such that it does not impede migration of aquatic wildlife.
- Black Hills shall require all personnel working on-site to review the CPW publication "Living with Bears" (Available online: <http://wildlife.state.co.us/WildlifeSpecies/LivingWithWildlife/Mammals/Pages/LivingWithBears.aspx>), developed as part of the Bear Aware program.
- Reporting of poaching incidents to Operation Game Thief shall be encouraged.
- Because dry open-cut construction requires isolating the workspace between the temporary dam upstream and downstream, fish and amphibians shall be captured, removed from the isolated workspace by seining and/or use of electroshock and placed downstream.
- Workers shall carpool to drilling locations during winter months (December through April).

### **Cultural Resources, Tribal and Native American Religious Concerns**

- Project components shall be moved to avoid eligible or potentially eligible sites including proposed well pad WT 12-16 and possibly well pad DC 1-13. Proposed pipeline disturbance that would impact sites 5ME.3837, 5ME.18854 and possibly 5ME.3680 shall be rerouted around the sites.
- A contracted archaeologist from a permitted cultural resource firm approved by the GJFO archaeologist shall monitor known sites during any and all construction activity

within 100 yards, to prevent any surface disturbance. See Table 3.4-3, Potential Impacts and Mitigation Measures for NRHP-Eligible Sites within the APE. (DOI-BLM-CO-130-2012-0021-EA).

- Per the Memorandum of Agreement among the BLM, the SHPO, and Black Hills, the BHDEP Treatment Plan will document any adverse effects and specify measures for site avoidance, minimizing impacts, and treatments.

#### **Paleontological Resources**

- Prior to construction, it shall be determined if Wasatch Formation bedrock outcrop is present in any project area proposed for disturbance.
- If Wasatch Formation bedrock outcrop is present, a paleontological survey shall be completed before the application is approved.
- An on-site monitor (BLM-permitted paleontologist) shall be present during construction in areas of Wasatch Formation bedrock outcrop.

#### **Tribal and Native American Religious Concerns**

- Proposed well pad WT 12-16 shall be moved to protect site 5ME6445, identified during previous consultation as being located in an area of concern to the Ute Tribe.
- Tribal representatives have consulted with the BLM GJFO on similar projects and have provided instructions for the protection of culturally sensitive sites should any be discovered during construction. If new information is provided by Native Americans during project implementation, additional or edited terms and conditions of mitigation may have to be negotiated or enforced.

#### **Visual Resources**

- Visual Contrast Rating evaluations and/or Sensitivity Rating evaluations shall be conducted on a site-specific basis, based on BLM on-site inspections.
- Outdoor lighting on facilities and/or drilling rigs shall be down-directed, with fixtures having a 90 degree cutoff, to eliminate glare and minimize upward light scattering.
- For all project components, a detailed, site-specific inventory and plan describing how the proposal would meet the VRM classification of the area shall be required.
- In highly visible areas, tanks shall be low-profile or set in-ground to minimize visual dominance.
- As practical and per VRM evaluation, use of gravels or soils for surfacing roads and pads shall avoid high color and textural contrast with the native soil and rock components – e.g., no river cobbles or pit run.

#### **Wastes**

- The BLM, CDPHE Water Quality Control Division and CPW shall be contacted immediately if a reportable spill occurs.
- Spill station locations shall be established and placed in strategic locations.

#### **Recreation**

- Warning signs shall be posted on access roads to alert recreationists and project personnel to each other's presence and to help avoid accidents.

- Construction timing shall be coordinated with area outfitters and landowners to avoid conflicts with users of dispersed recreation sites and to mitigate impacts to them.

### **Range Management**

- Planned activities shall be coordinated with affected grazing permit holders.
- Suitable fencing shall be installed (in consultation with BLM wildlife and range staff) to avoid over-grazing and to support successful reclamation. Salt licks and water tanks, which encourage animal congregation, shall be placed away from revegetated disturbance.
- Livestock owners shall be reimbursed for loss or damage to livestock resulting from the Proposed Action.
- The grazing allotment boundary fence line coinciding with proposed well Pad HDU 9-41 shall be realigned and rebuilt to go around the well pad.

### **Forest Management**

- A wood-cutting permit shall be purchased from the BLM prior to clearing timbered areas. No removal of trees or brush-hogging would be approved without a permit; no tree cutting or removal is permitted during surveying operations.
- When not shredded and salvaged with topsoil, woody materials 4+ inches in diameter shall be cut into sections not to exceed 4 feet in length. These may be replaced following reclamation or placed near the harvest area to be removed by individuals with BLM harvest permits.

### **Fire and Fuels Management**

- A Fire Management Plan (Plan) specific to oil and gas operations shall be prepared by Black Hills and included in their Exploratory Proposal or in each APD, to assist Black Hills and its contractors to prevent and/or contain project-related accidental ignitions.
- A fire safety and evacuation plan shall be prepared to instruct employees and contractors in case a wildfire move toward an active pad/facility, and what they should do if they start a wildfire.
- Proper precautions shall be taken at all times to prevent wildfires. During conditions of extreme fire danger (e.g., National Weather Service issued Red Flag warning), surface use operations might be limited or suspended in specific areas.
- Trees and brush associated with construction may have to be removed from sites to prevent elevated and hazardous fuel loading. Cleared trees and brush may need to be mulched and scattered or incorporated into BMPs such as perimeter berms. In areas of dense forestation, trees shall be removed to a distance of at least twice their height from any heat-producing facility. For example, 20 foot tall trees would need to be at least 40 feet from production facilities.
- Any welding, acetylene or other open flame, shall be operated in an area barren or cleared of all flammable materials and no closer to vegetation than at least 10 feet.
- Internal combustion engines shall be equipped with approved spark arrestors and vehicles shall be parked in designated areas without fire/fuels hazards.