

U.S. Department of the Interior  
Bureau of Land Management  
Little Snake Field Office  
455 Emerson Street  
Craig, CO 81625-1129

## ENVIRONMENTAL ASSESSMENT

**EA-NUMBER:** DOI-BLM-CO-N010-2010-0109-EA

**CASEFILE/PROJECT NUMBER/LEASE NUMBER:** COC61491

**PROJECT NAME:** Big Hole Gulch Unit pipelines, pipeline facility and access road

**LEGAL DESCRIPTION:** E2 Sec.8, W2 Sec. 9, T.11 N., R. 94 W., 6<sup>th</sup> P. M.

**APPLICANT:** Yates Petroleum Corporation

**PLAN CONFORMANCE REVIEW:** The proposed action is subject to the following plan:

Name of Plans: Little Snake Resource Management Plan and Record of Decision (ROD) approved on April 26, 1989; and the Colorado Oil and Gas Leasing & Development Environmental Impact Statement (EIS) and the ROD signed on November 5, 1991.

Remarks: The proposed pipelines would be located within Management Unit 6 (Little Snake Resource Management Plan). One of the objectives of Management Unit 6 is to provide for the development of the oil and gas resource. The development of other resource uses/values within this unit is allowed consistent with the management objectives for oil, gas, and forest resources.

The proposed action was reviewed for conformance with this plan (43 CFR 1610.5, BLM 1617.3). The proposed action is in conformance with the objectives for this management unit.

**NEED FOR PROPOSED ACTION:** To provide for the development of oil and gas resources and to supply energy resources to the American public.

**PUBLIC SCOPING PROCESS:** This project has been posted on the BLM Little Snake NEPA log at [http://www.blm.gov/co/st/en/BLM\\_Information/nepa/lso.html](http://www.blm.gov/co/st/en/BLM_Information/nepa/lso.html).

**DESCRIPTION OF PROPOSED ACTION:** The proposed action would be to approve the Sundry Notice (SN) submitted by Yates Petroleum Corporation. This oil and gas lease operator proposes to install 7970' of buried natural gas pipeline to the Big Hole Gulch Unit Wells #1, #2, and

#3 and a pipeline facility on BLM administered land located in Section 8 and 9, T11N, R94W. A Sundry Notice and Plan of Development have been submitted to the LSFO that describe the proposed gathering system pipeline and facilities. Mitigation not incorporated by Yates Petroleum Corporation in the SN would be attached by the BLM as Conditions of Approval (COA) to an approved SN.

The proposed pipeline and facilities would be located approximately 43.3 miles southwest of Baggs, Wyoming. The approximate date work would start is summer of 2010 and the estimated duration of construction and installation of the pipeline would be 30 days. Moffat County Roads 4, 7, and 92 would be used to access the project area.

Yates Petroleum Corporation proposes to construct 74' of new access road and 100' by 100' pipeline facility pad, disturbing 0.3 acres. The facility pad would house 1 pig receiver, 1 separator, and 1 check meter. The facility pad would be cleared of all vegetation and leveled. Topsoil and native vegetation would be stockpiled for use in interim reclamation. Road construction would conform to BLM specifications for a "resource road," with a 14-foot wide running surface. All new road construction and upgrading would occur on federally administered surface and on lease COC61491.

Yates Petroleum Corporation proposes the installation of 6,429' to Big Hole Gulch Unit Well #1, 80' to BHGU #2, and 1,461' to BHGU #3 of 6" steel buried natural gas pipeline in a 50' right-of-way, disturbing 9.1 acres. Approximately 6" of topsoil would be stripped along the working side of the ROW and would be stockpiled for reclamation. Pipeline corridor would be trenched, pipeline installed, back-filled, and reclaimed with seeding to take place in the fall.

Total surface disturbance for the proposed action would be 9.4 acres.

**NO ACTION ALTERNATIVE:** The "no action" alternative is that the pipelines would not be permitted and therefore no pipelines would be installed. Yates Petroleum Corporation holds a valid and current oil and gas lease for the area where the proposed Big Hole Gulch Unit pipelines would be located. Under leasing contracts, the BLM has an obligation to allow mineral development if the environmental consequences are not irreversible or too severe. The proposed action is consistent with the ROD and the Oil and Gas Leasing EIS, therefore the no action alternative will not be analyzed further in this EA.

## **AFFECTED ENVIRONMENT/ENVIRONMENTAL CONSEQUENCES/MITIGATION MEASURES**

### **CRITICAL RESOURCES**

#### **AIR QUALITY**

Affected Environment: There are no special designation air sheds or non-attainment areas nearby that would be affected by the proposed action.

Environmental Consequences: Short term, local impacts to air quality from dust would result during and after well pad construction. Drilling operations produce air emissions such as exhaust from diesel engines that power drilling equipment. Air pollutants could

include nitrogen oxides, particulates, ozone, volatile organic compounds, fugitive natural gas, and carbon monoxide. Gas flaring reduces the health and safety risks in the vicinity of the well by burning combustible and poisonous gases like methane and hydrogen sulfide.

Mitigative Measures: None.

Name of specialist and date: Shawn Wiser 07/02/10

## **AREA OF CRITICAL ENVIRONMENTAL CONCERN**

Affected Environment: Not Present.

Environmental Consequences: Not Applicable.

Mitigative Measures: Not Applicable.

Name of specialist and date: Shawn Wiser 07/12/10

## **CULTURAL RESOURCES**

Affected Environment: Cultural resources, in this region of Colorado, range from late Paleo-Indian to Historic. For a general understanding of the cultural resources in this area of Colorado, see *An Overview of Prehistoric Cultural Resources, Little Snake Resource Area, Northwestern Colorado*, Bureau of Land Management Colorado, Cultural Resources Series, Number 20, *An Isolated Empire, A History of Northwestern Colorado*, Bureau of Land Management Colorado, Cultural Resource Series, Number 2 and *Colorado Prehistory: A Context for the Northern Colorado River Basin*, Colorado Council of Professional Archaeologists.

Environmental Consequences: The proposed project, Bighole Gulch Unit Pipelines, has undergone a Class III cultural resource surveys:

Werner, Heidi

2010 Class III Cultural Resource Inventory for the Yates Petroleum Corporation Bighole Gulch Unit #2 Pipeline, Moffat County, Colorado (BLM 12.26.2010)

2010 Class III Cultural Resource Inventory for the Yates Petroleum Corporation Bighole Gulch Unit #3 Pipeline, Moffat County, Colorado (BLM 12.27.2010)

2010 Class III Cultural Resource Inventory for the Yates Petroleum Corporation Bighole Gulch Unit #1 Pipeline Reroute, Moffat County, Colorado (BLM 12.31.2010)

The survey identified no eligible to the National Register of Historic Places cultural resources within the 100 ft pipeline corridor. There is one eligible site that requires avoidance of 100m. That avoidance buffer encroaches on the area of potential effect. The proposed project may proceed as described with the following mitigative measures in place.

Mitigative Measures: 5MF6844 must have construction barrier fencing installed at the south and east edge of the proposed construction corridor where the pipeline turns north on Moffat County road 92. Due to previous observance of thermal features in the county road, an open trench inspection is required during the project.

The following standard stipulations apply for this project:

1. The operator is responsible for informing all persons who are associated with the operations that they will be subject to prosecution for knowingly disturbing historic or archaeological sites, or for collecting artifacts. If historic or archaeological materials are encountered or uncovered during any project activities, the operator is to immediately stop activities in the immediate vicinity of the find and immediately contact the authorized officer (AO) at (970) 826-5000. 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 identified area can be used for project activities again; and
- Pursuant to 43 CFR 10.4(g) (Federal Register Notice, Monday, December 4, 1995, Vol. 60, No. 232) the holder of this authorization must notify the AO, by telephone at (970) 826-5000, and with written confirmation, immediately upon the discovery of human remains, funerary items, sacred objects, or objects of cultural patrimony. Further, pursuant to 43 CFR 10.4(c) and (d), you must stop activities in the vicinity of the discovery and protect it for 30 days or until notified to proceed by the authorized officer.

2. If the operator wishes, at any time, to relocate activities to avoid the expense of mitigation and/or the delays associated with this process, the AO will assume responsibility for whatever recordation and stabilization of the exposed materials may be required. Otherwise, the operator will be responsible for mitigation costs. 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.

Name of specialist and date: Robyn Watkins Morris 07/12/10

## **ENVIRONMENTAL JUSTICE**

**Affected Environment:** The proposed action would be located in an area of isolated dwellings. Recreation, oil and gas, and ranching are the primary economic activities.

**Environmental Consequences:** The project area would be relatively isolated from population centers, so no populations would be affected by physical or socioeconomic impact. The proposed action would not directly affect the social, cultural or economic well-being and health of Native American, minority or low-income populations.

Mitigative Measures: None.

Name of specialist and date: Louise McMinn 07/02/10

## **FLOOD PLAINS**

Affected Environment: There are no 100-year floodplains present on public lands within the proposed project area.

Environmental Consequences: None.

Mitigative Measures: None.

Name of specialist and date: Emily Spencer 07/12/10

Source: USDA-NRCS Soil Data Viewer version 5.2.0016: <http://soildataviewer.nrcs.usda.gov/>

## **INVASIVE, NONNATIVE SPECIES**

Affected Environment: Invasive and noxious weeds are present in the area. Invasive annuals such as downy brome (cheatgrass), halogeton, blue mustard and yellow alyssum are common, occupying disturbed areas. Invasive annual weeds are typically established on disturbed and high traffic areas whereas biennial and perennial noxious weeds are less common in occurrence. Downy brome and halogeton are on the Colorado List C of noxious weeds and efforts to control halogeton are intensifying in this area. Colorado List B noxious weeds that are present within the surrounding areas include Russian knapweed, hoary cress (whitetop), Canada thistle and bull thistle. Other Colorado List B noxious weeds that are present in the vicinity and could potentially become established within these allotments include hounds tongue, Dalmatian toadflax and other biennial thistles. The BLM is in cooperation with the Moffat County Cooperative Weed Management program to employ the principals of Integrated Pest Management to control noxious weeds on public lands. Additionally, the BLM, Moffat County, livestock operators, pipeline companies and oil and gas operators have formed the Northwest Colorado Weed Partnership to collaborate efforts on controlling weeds and finding the best integrated approaches to achieve results.

Environmental Consequences: The surface disturbing activities and associated traffic involved with drilling wells, constructing the access roads, installing pipelines, and subsequent activities would create an environment and provide a mode of transport for invasive species and other noxious weeds to become established. Construction equipment and any other vehicles and equipment brought onto the site can introduce weed species. Wind, water, recreation vehicles, livestock and wildlife would also assist with the distribution of weed seed into the newly disturbed areas. The annual invasive weed species (downy brome, yellow alyssum, blue mustard and other annual weeds) occurring on adjacent areas and would occupy the disturbed areas; the bare soils and the lack of

competition from a perennial plant community would allow these weed species to grow unchecked and can affect the establishment of seeded plant species. Halogeton is a noxious annual weed that could also occupy the disturbed areas, but this weed species would likely require intensive control with herbicides to prevent it from moving into adjacent rangelands. Establishment of perennial grasses and other seeded plants is expected to provide the necessary control of invasive annual weeds within 2 or 3 years. Additional seeding treatments of the disturbed areas may be required in subsequent years if initial seeding efforts have failed.

The perennial and biennial noxious weeds in the area are less frequently established on the uplands but some potential exists for their establishment in draws and swales or areas along the road that would collect additional water. The largest concern in the project area would be for these species to become established and not be detected, providing seed which can be moved onto adjacent rangelands. The operator would be required to control any invasive and/or noxious weeds that become established within the disturbed areas.

Mitigative Measures: Mitigation attached as Conditions of Approval to minimize disturbance and obtain successful reclamation of the disturbed areas, as well as weed control utilizing integrated practices, including herbicide applications would help to control the noxious weed species. All principles of Integrated Pest Management should be employed to control noxious and invasive weeds on public lands.

Name of specialist and date: Christina Rhyne 07/13/10

## **MIGRATORY BIRDS**

Affected Environment: BLM Instruction Memorandum No. 2008-050 provides guidance towards meeting BLM's responsibilities under the Migratory Bird Treaty Act (MBTA) and Executive Order (EO) 13186. The guidance emphasizes management of habitat for species of conservation concern by avoiding or minimizing negative impacts and restoring and enhancing habitat quality. The LSFO provides both foraging and nesting habitat for a variety of migratory bird species. Several species on the USFWS's Birds of Conservation Concern (BCC) List occupy these habitats within the LSFO.

Native plant communities in the Big Hole Gulch area are comprised primarily of sagebrush stands with a healthy understory of native grasses and forbs. A variety of migratory birds may utilize these vegetation communities within the project area during the nesting period (May through July) or during spring and fall migrations. The project area contains potential nesting and/or foraging habitat for the following USFWS 2008 Birds of Conservation Concern: golden eagle, Brewer's sparrow, sage sparrow, sage thrasher and loggerhead shrike. The closest golden eagle nest is a few miles away from the proposed pipeline, but this species may hunt for prey in the general area.

Environmental Consequences: The Proposed Action would disturb 9.4 acres of migratory bird habitat. Although this disturbance would be minimal on a landscape level, it would

decrease patch size and may degrade habitat on a small scale. Indirectly, habitat effectiveness adjacent to the pipeline, new road and facility pad would be reduced as a result of noise and human activity during construction. If construction activities occur during the nesting season, there could be negative impacts to migratory bird species through nest destruction or increased stress leading to nest abandonment. Timing limitations to protect greater sage-grouse (see T&E Section) would cover most of the migratory bird nesting season, so the risk for these impacts would be low. Overall, the project is not expected to have a measurable influence on the abundance or distribution of migratory birds at a regional scale.

Mitigative Measures: None.

Name of Specialist and Date: Desa Ausmus 07/9/10

### **NATIVE AMERICAN RELIGIOUS CONCERNS**

A letter was sent to the Eastern Shoshone, Uinta and Ouray Tribal Council, Southern Ute Tribal Council, Ute Mountain Ute Tribal Council on May 26, 2009. The letter listed the FY2010 projects that the BLM would notify them on and projects that would not require notification. A follow-up phone call was performed on July 26, 2009. No comments were received (Letter on file at the Little Snake Field Office). This project requires no additional notification.

Name of specialist and date: Robyn Watkins Morris 07/12/10

### **PRIME & UNIQUE FARMLANDS**

Affected Environment: No Prime and/or Unique Farmlands are present on federal lands in the vicinity of the proposed project.

Environmental Consequences: None.

Mitigation Measures: None.

Name of specialist and date: Emily Spencer 07/12/10

Source: USDA-NRCS Soil Data Viewer version 5.2.0016: <http://soildataviewer.nrcs.usda.gov/>

### **T&E AND SENSITIVE ANIMALS**

Affected Environment: There are no ESA listed or proposed species that inhabit or derive important benefit from the project area. Critical habitat for the razorback sucker, Colorado pikeminnow, bonytail chub and humpback chub is located downstream of the project area.

The general area provides habitat for greater sage-grouse, a BLM sensitive species and a candidate for ESA listing. Greater sage-grouse utilize sagebrush ecosystems in the Big Hole Gulch area for breeding and nesting. There are two active leks in the vicinity of the proposed pipeline.

Big Hole Gulch also provides habitat for one additional BLM sensitive species, Brewer's sparrow. Brewer's sparrows are a summer resident in Colorado and nest in sagebrush stands. Nests are constructed in sagebrush and other shrubs in denser patches of shrubs. This species would likely be nesting in the project area from mid-May through mid-July.

Environmental Consequences:

#### *Colorado River Fish*

In May 2008, BLM prepared a Programmatic Biological Assessment (PBA) that addresses water depleting activities associated with BLM's fluid minerals program in the Colorado River Basin in Colorado. In response to BLM's PBA, the FWS issued a Programmatic Biological Opinion (PBO) (ES/GJ-6-CO-08-F-0006) on December 19, 2008, which determined that BLM water depletions from the Colorado River Basin are not likely to jeopardize the continued existence of the Colorado pike minnow, humpback chub, bonytail, or razorback sucker, and that BLM water depletions are not likely to destroy or adversely modify designated critical habitat.

A Recovery Implementation Program for Endangered Fish Species in the Upper Colorado River Basin was initiated in January 1988. The Recovery Program serves as the reasonable and prudent alternative to avoid jeopardy and provide recovery to the endangered fishes by depletions from the Colorado River Basin. The PBO addresses water depletions associated with fluid minerals development on BLM lands, including water used for well drilling, hydrostatic testing of pipelines, and dust abatement on roads. The PBO includes reasonable and prudent alternatives developed by the FWS which allow BLM to authorize oil and gas wells that result in water depletion while avoiding the likelihood of jeopardy to the endangered fishes and avoiding destruction or adverse modification of their critical habitat. As a reasonable and prudent alternative in the PBO, FWS authorized BLM to solicit a one-time contribution to the Recovery Implementation Program for Endangered Fish Species in the Upper Colorado River Basin (Recovery Program) in the amount equal to the average annual acre-feet depleted by fluid minerals activities on BLM lands.

This project has been entered into the Little Snake Field Office fluid minerals water depletion log which will be submitted to the Colorado State Office at the end of the Fiscal Year.

#### *Greater Sage-grouse*

Impacts to grouse species from oil and gas development are discussed in the Colorado Oil and Gas EIS (1991). Impacts include, but are not limited to, displacement into less suitable habitat, nest abandonment, destruction of nests and loss of habitat. Other impacts, such as habitat fragmentation and the spread of weedy plants can also degrade habitat. The Proposed Action would temporarily alter 9.1 acres of habitat and remove .30 acres of habitat. Noise and increased human activity related to pipeline construction can disrupt breeding and nesting activities. To prevent significant impacts to greater sage-grouse construction associated with the proposed pipeline, access road and facility pad will not be permitted from March 1 to June 30. This timing limitation would prevent accidental nest destruction, nest and lek abandonment and displacement into less suitable habitat.

The proposed pipeline would represent an additional source of habitat fragmentation in the Big Hole Gulch area. Since there are only three active well pads in this area, fragmentation is probably at a level that is not significantly impacting grouse at this time. If development in the area continues, sage grouse use of the habitat may decrease.

*Brewer's Sparrow*

Impacts to Brewer's sparrows are described in the Migratory Bird section of this EA.

Mitigative Measures: CO-30 Grouse nesting habitat. Greater sage-grouse leks will be avoided by 2 miles between March 1 and June 30 to protect nesting grouse. There will be no exceptions to this timing limitation.

Name of Specialist and Date: Desa Ausmus 07/9/10

**T&E AND SENSITIVE PLANTS**

Affected Environment: There are no federally listed threatened or endangered or BLM sensitive plant species present on or near the proposed pipeline route.

Environmental Consequences: None.

Mitigative Measures: None.

Name of specialist and date: Kathy McKinstry 07/12/10

**WASTES, HAZARDOUS OR SOLID**

Affected Environment: If a release does occur, the environment affected would be dependent on the nature and volume of material released. If there are no releases, there would be no impact on the environment.

Environmental Consequences: Consequences would be dependent on the volume and nature of the material released. In most every situation involving hazardous materials,

there are ways to remediate the area that has been contaminated. Short-term consequences would occur, but they can be remedied, and long-term impacts would be minimal.

Mitigative Measures: None.

Name of specialist and date: Shawn Wisner 07/02/10

## **WATER QUALITY – GROUND**

Affected Environment: The nearest water well is in excess of two miles. Water levels were found at depths between 125 and 150 feet.

Environmental Consequences: Surface disturbances such as pipeline construction and associated activities would have no affect to ground water quality.

Mitigative Measures: None.

Name of specialist and date: Marty O'Mara 07/14/10

## **WATER QUALITY – SURFACE**

Affected Environment: Any surface runoff from the proposed project area would drain via ephemeral tributaries into Bighole Gulch (approximately 1 mile downstream from site), a tributary of the Little Snake River, or the Little Snake River itself (approximately 4 miles downstream from site). Water quality for all tributaries of the Little Snake River from a point immediately below the confluence with Fourmile Creek to the confluence with the Yampa River is use protected and must support Aquatic Life Warm 2, Recreation N, and Agricultural uses. Those portions of the Little Snake River which are in Colorado, from its first crossing of the Colorado/Wyoming border to a point immediately above the confluence with Powder Wash must support Aquatic Life Cold 1, Recreation E, Water Supply, and Agricultural uses. There are no water quality impairments or suspected water quality issues for waters influenced by the project area considered in the proposed action.

Environmental Consequences: Surface waters adjacent to or influenced by the proposed project areas are currently supporting classified uses. Increased sedimentation towards Bighole Gulch and/or the Little Snake River during spring runoff or from high intensity rainstorms is the most likely environmental consequence from the proposed action. Although it is unlikely that sediment may be transported off site to perennial waters, the stabilization and rehabilitation seeding and mitigation provided in the Plan of Development following any surface disturbance would further reduce the potential for surface runoff.

Mitigative Measures: None.

Name of specialist and date: Emily Spencer 07/12/10

Reference: Colorado Department of Public Health and Environment Water Quality Control Commission. 2010. Regulations #33, 37, and 93. <http://www.cdphe.state.co.us/regulations/wqccregs/index.html>

## **WETLANDS/RIPARIAN ZONES**

Affected Environment: There are no streams, wetlands, seeps, or springs on federal lands within or immediately adjacent to the proposed project site.

Environmental Consequences: None.

Mitigative Measures: None.

Name of specialist and date: Emily Spencer 07/12/10

## **WILD & SCENIC RIVERS**

Affected Environment: Not Present.

Environmental Consequences: Not Applicable.

Mitigative Measures: Not Applicable.

Name of specialist and date: Shawn Wiser 07/12/10

## **WSAs, WILDERNESS CHARACTERISTICS**

Affected Environment: Not Present.

Environmental Consequences: Not Applicable.

Mitigative Measures: Not Applicable.

Name of specialist and date: Shawn Wiser 07/12/10

## **NON-CRITICAL ELEMENTS**

### **RANGE MANAGEMENT**

Affected Environment: The proposed pipeline would be located within the Piskwik grazing allotment. This allotment is permitted for cattle grazing from May through December. There is a water well and associated pipeline approximately two miles to the south west of the proposed gas pipeline (BLM range improvement project #001241). The water well and pipeline were developed to deliver water for livestock grazing throughout the allotment and also to the neighboring allotment to the west.

Environmental Consequences: The proposed pipeline, gas wells and associated road construction would remove 9.4 acres of native vegetation. This loss of vegetation and associated disturbance from vehicle traffic, noise and human presence may cause the cattle to alter their distribution pattern. This may result in over utilization of the vegetative resources in other parts of the grazing allotment. Gates leading into the allotment could be left open by the drilling crew and other personnel, which could lead to possible livestock trespass situations. The presence of livestock may hinder reclamation efforts.

Mitigative Measures: Installation of a cattle guard at gate locations would prevent livestock from leaving the allotment through an open gate. Fencing of the pipeline during reclamation efforts may help the establishment of native vegetation.

Name of specialist and date: Kathy McKinstry 07/12/10

### REALTY AUTHORIZATIONS

Affected Environment: The project route crosses or is adjacent to existing realty authorizations COC052705, COC071536, COC068936, and COC069302.

Environmental Consequences: Existing pipelines could be accidentally damaged during construction activities. Impacts would be temporary until the damage is repaired.

Mitigative Measures: Damage to existing pipelines would be minimized by:

- Utilize the “One Call” system to locate and stake the centerline and limits of all underground facilities in the area of proposed excavations.
- Provide 48 hour notification to the owner/operator of facilities prior to performing any work within 10 feet of buried or above ground pipelines.

Name of Specialist and Date: Louise McMinn 07/02/10

### SOILS

Affected Environment:

Soil Map Unit (MU) & Soil Name (Acres in Allot.)	Map Unit Setting	Description
MU 199 Torriorthents-Torripsamments complex, 12 to 40 % slopes	<i>Elevation:</i> 6,000 – 7,200 feet <i>Mean annual precipitation:</i> 9-13 inches <i>Ecological Site:</i> not given	These hillslope soils are well to excessively drained with moderately slow to rapid permeability and high runoff potential. Available water capacity is low and the soil profile is typically 19-30 inches deep.
MU 174	<i>Elevation:</i> 6,100 – 6,700 feet	These soils are somewhat excessively drained with moderately rapid to rapid

Soil Map Unit (MU) & Soil Name (Acres in Allot.)	Map Unit Setting	Description
Ryark-Maybell complex, 1 to 12% slopes	<u>Mean annual precipitation:</u> 11-13 inches  <u>Ecological Site:</u> Rolling loam and Sandhills	permeability and low to very low runoff potential. Available water capacity is low and the soil profile is typically 60 inches deep.
MU 75  Fonce sandy loam, 1 to 8% Slopes	<u>Elevation:</u> 6,000 – 6,600 feet  <u>Mean annual precipitation:</u> 10-12 inches  <u>Ecological Site:</u> Loamy 7-10" PPT	These soils are well drained with moderate permeability and medium runoff potential. Available water capacity is low and the soil profile is typically 60 inches deep. The main limitation in these soils is very dry climate.

Data taken from *Soil Survey of Moffat County Area, Colorado (2004)*.

**Environmental Consequences:** The construction and operation of the proposed pipeline, pipeline facility, and access road would affect soils within and immediately adjacent to the proposed area of disturbance. Increased soil erosion from wind and water would occur during construction of the facility, pipeline, and access road. Erosion would continue throughout the operational life of the facility and access road. Loss of topsoil, soil compaction, and possible increases in sediment loads to drainages are impacts most likely to occur.

Vegetation and soil would be removed from approximately 9.4 acres of land. Soil productivity would decline due to reduced soil microbial activity, impaired water infiltration, mixing of soil horizons, top soil loss, and introduction of weeds. Soil loss from construction would be greatest shortly after project start and would decrease in time as a result of stabilization through revegetation and reclamation of disturbed areas. Soil erosion would be reduced to an acceptable level with the mitigation described in the Plan of Development and Conditions of Approval in the approved Sundry Notice. This mitigation would reduce the potential to have excessive sediments and salts in runoff water from the project area.

**Mitigative Measures:** Additional mitigative measures would be employed to prevent or reduce accelerated erosion if it begins to occur within or on constructed drainage and diversion ditches or surface drainages affected by the road, pipelines, or facilities pad.

Name of specialist and date: Shawn Wiser 07/02/10

## UPLAND VEGETATION

**Affected Environment:** The Big Hole Gulch Unit pipeline would be located in a loamy 7-10" range site. This range site typically supports a vegetation community made up of Wyoming big sagebrush, Indian ricegrass, needleandthread grass, streambank wheatgrass, Sandberg's bluegrass, western wheatgrass and prairie junegrass. Species present on site

included Wyoming big sagebrush, prickly pear cactus, long-leafed phlox, buckwheat, prickly phlox, aster, globemallow, Sandberg's bluegrass, Indain ricegrass needleandthread, bluebunch wheatgrass, western wheatgrass and prairie junegrass. The vegetation exhibits good density, diversity and vigor.

Environmental Consequences: The proposed pipeline would completely remove the vegetation from 9.0 acres on Federal surface and the access road would remove an additional 0.4 acres. While this removal would be relatively minor in the larger landscape, it would be in addition to numerous other plant community intrusions such as several two-track roads, other gas wells, fences, water wells and pipelines. The surface disturbance cause by the pipeline construction would be stabilized and reclaimed according to BLM standards; the pipeline would be disked and contoured and then reseeded using a BLM approved shrub, grass and forb seed mix. In the long term, after the life of the producing wells has ended, all disturbances would be reseeded to native vegetation per the drilling and surface use plans. It would be imperative that all COAs regarding weed control and revegetation are followed to avoid increasing cheatgrass (*Bromus tectorum*) presence on and in areas surrounding the proposed action. As long as weeds are controlled and all disturbed areas are reseeded to prescribed mixes of native plant species and establishment is ensured as required, the negative impacts to the native plant communities would be effectively mitigated.

Mitigative Measures: None.

Name of specialist and date: Kathy McKinstry 07/12/10

## **WILDLIFE, TERRESTRIAL**

Affected Environment: Native plant communities in the Big Hole Gulch area are comprised primarily of sagebrush stands with a healthy understory of native grasses and forbs. This plant community provides habitat for a variety of big game, small mammals, birds and reptiles. Common species, such as coyotes, cottontail rabbits and ground squirrels likely use these habitats. The project area provides winter habitat for mule deer, pronghorn and elk, however, none of this habitat is mapped as "critical or severe winter" by the CDOW.

Environmental Consequences: Approximately 9.4 acres of wildlife habitat would be altered result of construction of the pipeline, access road and facility. Impacts to wildlife species from oil and gas development are discussed in the Colorado Oil and Gas EIS (1991). Impacts include, but are not limited to, displacement into less suitable habitat, increased stress and loss of habitat. Surrounding habitat in undisturbed areas should be capable of supporting any displaced wildlife. Once construction is complete, most wildlife would be able to reoccupy areas surrounding the pipeline. However, some wildlife may choose to avoid the location due to human activity.

Most small mammals, birds and reptiles using the project area would be capable of avoiding construction equipment and should not be directly harmed by these activities. Some burrowing animals may be killed by construction equipment. This should be considered a short-term negative impact that is not likely to harm populations of any species.

Mitigative Measures: None.

Name of Specialist and Date: Desa Ausmus 07/09/10

**OTHER NON-CRITICAL ELEMENTS:**

Non-Critical Element	NA or Not Present	Applicable or Present, No Impact	Applicable & Present and Brought Forward for Analysis
Fluid Minerals		EMO 7/14/10	
Forest Management	SW 07/02/10		
Hydrology/Ground		See Ground Water	
Hydrology/Surface		ELS 07/12/10	
Paleontology		EMO 7/14/10	
Range Management			KLM 07/12/10
Realty Authorizations			LM 07/02/10
Recreation/Transportation		SW 07/12/10	
Socio-Economics		LM 07/02/10	
Solid Minerals		JAM 07/07/10	
Visual Resources		SW 07/12/10	
Wild Horse & Burro Mgmt	SW 07/02/10		
Wildlife, Aquatic	DA 7/9/10		

**CUMULATIVE IMPACTS SUMMARY:** Cumulative impacts may result from the development of the Big Hole Gulch Unit pipelines, pipeline facility and access road when added to non-project impacts that result from past, present, and reasonably foreseeable future actions. The potential exists for future oil and gas development throughout the Big Hole Gulch Unit. Other past or existing actions near the project area that have influence on the landscape are wildfire, recreation, hunting, grazing, and ranching activities.

Surface disturbance associated with oil and gas activity would increase the potential for erosion and sedimentation. Displacement of hunters and recreationists during the short-term construction and drilling periods would occur. Contrasts in line, form, color, and texture from development would impact the visual qualities on the landscape.

Cumulative impacts to the plant communities within the gas lease and adjacent areas include an incremental reduction of continuity in the plant communities in terms of acreages that remain undisturbed. Loss of continuity results in smaller and smaller areas of undisturbed native vegetation and the potential for loss of integrity within the larger plant community. Fragmented plant communities can lose resilience to natural and man-made disturbance due to isolation of areas from seed sources necessary for proper age class distribution of plants, and subsequently, a greater opportunity for stressors such as drought to have a more severe impact on the plant community as a whole. The increased disturbance also makes native plant communities more susceptible to invasion by annual weeds as vectors for increasing weeds. Even with weed control measures applied, the potential for weeds to move further into undisturbed remnant areas increases as these remnants become smaller and more isolated from larger undisturbed areas.

Cumulative impacts to the livestock grazing operations in the area may be increased through the proposed action. The grazing allotment in which this well is proposed is a summer/fall cattle allotment. This area has not received the rapid rate of energy development compared to other areas of NW Colorado. The development that has occurred in this area has yet to negatively affect livestock production. If continued growth occurs, the growth in wells, roads, and human activity has the potential to reduce the availability of forage in this area far beyond direct impacts caused by construction. The potential impact to grazing activities permitted in the area is a loss of available Animal Unit Months (AUMs), i.e. a loss of the amount of livestock that the allotment can reasonably carry.

Habitat fragmentation from well pad construction and the associated roads have likely decreased the nesting suitability for migratory birds in the resource area. Ingelfinger (2001) found that roads associated with oil and gas development have a negative impact on passerines bird species. Bird densities were reduced within 100m of each road. Due to the amount of new road construction and an increase in traffic on these roads, passerine populations in the area are likely decreasing.

The cumulative impacts of additional wells, pipelines, and roads in the Big Hole Gulch Unit would continue to degrade habitat for the greater sage-grouse and Columbian sharp-tailed grouse. Fragmentation, mostly due to road construction, is an important factor contributing to a decrease in habitat quality. Disturbances such as higher traffic volume and other human activities also contribute to degradation of habitat quality. Continued oil and gas development would lead to decreased sage grouse use of the habitat.

Although big game species are able to adapt to disturbances better than other wildlife, increased development would still have impacts to mule deer, elk, and antelope. Timing stipulations adequately protect big game species during critical times of the year; however, continued oil and gas development would lead to decreased use of the habitat due to increased human activity. A significant amount of vehicle traffic occurs with oil and gas development. Impacts to big game may be vehicle-animal collisions, as these are a major cause of mortality for big game species.

References:

Ingelfinger, F. 2001. The Effects of Natural Gas Development on Sagebrush Steppe Passerines in Sublette County, Wyoming. University of Wyoming, Laramie, WY.

**STANDARDS:**

**PLANT AND ANIMAL COMMUNITY (animal) STANDARD:** The project area provides productive habitat for a variety of wildlife species. The project would not jeopardize the viability of any function, or have any discernible effect on animal abundance or distribution at any landscape scale. With implementation of mitigation measures and successful revegetation, the proposed pipeline would not preclude this standard from being met.

Name of specialist and date: Desa Ausmus 07/09/10

**SPECIAL STATUS, THREATENED AND ENDANGERED SPECIES (animal) STANDARD:** The Proposed Action would not jeopardize the viability of any special status animal population. With implementation of mitigation measures, the project would have minimal impacts to sensitive species. The Proposed Action would not preclude this standard from being met.

Name of specialist and date: Desa Ausmus 07/09/10

**PLANT AND ANIMAL COMMUNITY (plant) STANDARD:** The Proposed Action would completely remove 9.4 acres of native vegetation. As long as the COAs concerning revegetation and weed control are faithfully adhered to, the native plant community would eventually return and weeds such as halogeton and cheatgrass would be kept under control, and thus meet this standard.

Name of specialist and date: Kathy McKinstry 07/12/10

**SPECIAL STATUS, THREATENED AND ENDANGERED SPECIES (plant) STANDARD:** There are no federally listed threatened or endangered or BLM sensitive plant species within or in the vicinity of the proposed pipeline. This standard does not apply.

Name of specialist and date: Kathy McKinstry 07/12/10

**RIPARIAN SYSTEMS STANDARD:** There are no riparian or wetland resources identified on federal lands within or adjacent to the proposed project area. This standard does not apply.

Name of specialist and date: Emily Spencer 07/12/10

**WATER QUALITY STANDARD:** The proposed action would meet the public land health standard for water quality. Topsoil and native vegetation would be stockpiled for use in interim reclamation and the entire disturbed area would be reseeded with native plants in the fall to reduce accelerated erosion of the sites in the event of heavy storms. There are no water quality

impairments or suspected water quality issues for waters influenced by the project area considered in the proposed action.

Name of specialist and date: Emily Spencer 07/12/10

**UPLAND SOILS STANDARD:** The proposed action would not meet the upland soil standard for public land health, and it is not expected to while the access road and pipeline facility is used for production operations. The disturbed area would not exhibit characteristics of a healthy soil. Mitigation detailed in the Plan of Development and standards from the “Gold Book” would help to reduce erosion. Upland soil health would return to the pipeline corridor, pipeline facility, and access road after the project areas have been successfully reclaimed.

Name of specialist and date: Shawn Wiser 07/02/10

**PERSONS/AGENCIES CONSULTED:** Uintah and Ouray Tribal Council, Colorado Native American Commission, Colorado State Historic Preservation Office.

**FINDING OF NO SIGNIFICANT IMPACT (FONSI)**  
**DOI-BLM-CO-N010-2010-0109-EA**

Based on the analysis of potential environmental impacts contained in the EA and all other available information, I have determined that the proposal and the alternatives analyzed do not constitute a major Federal action that would adversely impact the quality of the human environment. Therefore, an EIS is unnecessary and will not be prepared. This determination is based on the following factors:

1. Beneficial, adverse, direct, indirect, and cumulative environmental impacts have been disclosed in the EA. Analysis indicated no significant impacts on society as a whole, the affected region, the affected interests, or the locality. The physical and biological effects are limited to the Little Snake Resource Area and adjacent land.
2. Public health and safety would not be adversely impacted. There are no known or anticipated concerns with project waste or hazardous materials.
3. There would be no adverse impacts to regional or local air quality, prime or unique farmlands, known paleontological resources on public land within the area, wetlands, floodplain, areas with unique characteristics, ecologically critical areas, or designated Areas of Critical Environmental Concern.
4. There are no highly controversial effects on the environment.
5. There are no effects that are highly uncertain or involve unique or unknown risk. Sufficient information on risk is available based on information in the EA and other past actions of a similar nature.
6. This alternative does not set a precedent for other actions that may be implemented in the future to meet the goals and objectives of adopted Federal, State, or local natural resource related plans, policies, or programs.
7. No cumulative impacts related to other actions that would have a significant adverse impact were identified or are anticipated.
8. Based on previous and ongoing cultural surveys, and through mitigation by avoidance, no adverse impacts to cultural resources were identified or anticipated. There are no known American Indian religious concerns or persons or groups who might be disproportionately and adversely affected as anticipated by the Environmental Justice Policy.

9. No adverse impacts to any threatened or endangered species or their habitat that was determined to be critical under the Endangered Species Act were identified. If, at a future time, there could be the potential for adverse impacts, treatments would be modified or mitigated not to have an adverse effect or new analysis would be conducted.

10. This alternative is in compliance with relevant Federal, State, and local laws, regulations, and requirements for the protection of the environment.

**DECISION AND RATIONALE:**

I have determined that approving this Sundry Notice is in conformance with the approved land use plan. It is my decision to implement the project with the mitigation measures provided in the Conditions of Approval. The project will be monitored as stated in the Compliance Plan outlined below.

**MITIGATION MEASURES:** The mitigation measures for this project are found in the file room of the Little Snake Field Office. The Sundry Notice and Conditions of Approval are found in the well case file labeled COC61491, BHGU Well #1, #2, & #3.

**COMPLIANCE PLAN(S):**

**Compliance Schedule**

Compliance will be conducted during the construction phase and drilling phase to insure that all terms and conditions specified in the lease and the approved APD are followed. In the event a producing well is established, periodic inspections as identified through the Inspection and Enforcement Strategy and independent well observations will be conducted. File inspections will include a review of all required reports and the Monthly Report of Operations will be evaluated for accuracy.

**Monitoring Plan**

The well location and access road will be monitored during the term of the lease for compliance with pertinent Regulations, Onshore Orders, Notices to Lessees, or subsequent COAs until final abandonment is granted; monitoring will help determine the effectiveness of mitigation and document the need for additional mitigative measures.

**Assignment of Responsibility**

Responsibility for implementation of the compliance schedule and monitoring plan will be assigned to the Fluid Mineral staff in the Little Snake Field Office. The primary inspector will be the Petroleum Engineering Technician, but the Petroleum Engineer, Natural Resource Specialist, Realty Specialist, and Land Law Examiner will also be involved.

**SIGNATURE OF PREPARER:**

**DATE SIGNED:**

**SIGNATURE OF ENVIRONMENTAL REVIEWER:**

**DATE SIGNED:**

**SIGNATURE OF AUTHORIZED OFFICIAL:**

**DATE SIGNED:**