

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:** CO-100-2007-074 EA

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

COC69110: BM Fed Well #14-15, #15-09, #15-15  
COC69111: BM Fed Well #14-05 and #14-11  
COC61759: BM Fed Well #22-01  
COC73008: Access Road Right-of-Way (ROW)

**PROJECT NAME:** Rattlesnake POD

**LEGAL DESCRIPTION:** All six wells and the access road would be located in Moffat County, Colorado.

BM Fed Well #14-05: SWNW Sec. 14, T12N, R89W, 6<sup>th</sup> PM  
BM Fed Well #14-11: NESW Sec. 14, T12N, R89W, 6<sup>th</sup> PM  
BM Fed Well #14-15: SWSE Sec. 14, T12N, R89W, 6<sup>th</sup> PM  
BM Fed Well #15-09: NESE Sec. 15, T12N, R89W, 6<sup>th</sup> PM  
BM Fed Well #15-15: SWSE Sec. 15, T12N, R89W, 6<sup>th</sup> PM  
BM Fed Well #22-01: NENE Sec. 22, T12N, R89W, 6<sup>th</sup> PM  
COC73008 road ROW: SESW Sec. 14, T12N, R89W, 6<sup>th</sup> PM

**APPLICANT:** New Frontier Energy, Inc.

**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 six coal bed methane wells and access roads would be located within Management Unit 1 (Little Snake Resource Management Plan). Management Unit 1 is rated as possessing the highest favorability for the occurrence of oil and gas resources

in the Little Snake Resource Area. The management objectives of this unit are to realize the potential for development of coal, oil, and gas 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:** The Notices of Staking (NOSs) have been posted in the public room of the Little Snake Field Office for a 30-day public review period beginning April 30, 2007, when the NOSs were received, and may be viewed during regular business hours (7:45 a.m. to 4:30 p.m.), Monday through Friday, except holidays.

**DESCRIPTION OF PROPOSED ACTION AND ALTERNATIVES:** The proposed action is to approve six Applications for Permit to Drill (APD), on four federal leases, submitted by New Frontier Energy, Inc. New Frontier Energy, Inc. proposes to drill six coal bed natural gas wells located on surface lands owned by Battle Mountain Company and southeast of Slater, CO in Section 14, 15, and 22 in T12N, R89W in Moffat County. APDs have been filed with the LSFO for the BM Federal Well #14-05, #14-11, #14-15, #15-09, #15-15, and #22-01. The APDs include drilling and surface use plans that cover mitigation of impacts to vegetation, soil, surface water, and other resources. Mitigation not incorporated by New Frontier Energy, Inc. in the drilling and surface use plans would be attached by the BLM as Conditions of Approval to an approved APD.

The proposed wells are located approximately 1.5 miles southeast of Slater, CO and would be accessed using Moffat County Road 1. Construction work is planned to start during the summer of 2008 and the estimated duration of construction and drilling for each of the wells is 30 days. Short access roads would be constructed for each well. New road construction would conform to BLM specifications for a "resource road," with a 16-foot wide running surface. Total surface disturbance for new access road construction would be approximately 3.7 acres. All road construction would be on leases held by New Frontier Energy, Inc. and approximately 1,378 feet would be on BLM surface and would require a federal ROW. A ROW application to upgrade an existing two-track road has been submitted by the applicant. The access road ROW would be located in Section 14, T12N, R89W and would be 1,325 feet long and 30 feet wide.

The proposed well pads would be cleared of all vegetation and leveled for drilling. Topsoil and native vegetation would be stockpiled for use in reclamation. The corners will be rounded to reduce the cut and fill as much as possible. The well pad size varies due to terrain and approximately 1 to 2 acres would be disturbed for construction of each well pad, totaling approximately 6 acres of new surface disturbance. This would include between 90' to 250' by 65' to 250' per well pad, the topsoil, and subsoil piles. A reserve pit would be constructed on each well pad to hold drill mud and cuttings. Backfilling, leveling and re-contouring would be completed within 6 months of well completion or well plugging. Pit fluids would be removed or solidified before backfilling. If a well is a producer, cut portions of the well site would be

backfilled and unused portions of the well sites would be stabilized and re-vegetated. If a coal bed natural gas well proves unproductive, it would be properly plugged and the entire well pad and access road would be reclaimed.

New Frontier Energy, Inc. did include plans, within the APDs, for gas gathering and water gathering lines that would be co-located in the same utilities trench, which would run parallel and adjacent to the proposed access roads. The utilities trench would be approximately 3 feet wide by 6 feet deep, with an estimated disturbance width of 25 feet. Approximately 15,522 feet of new co-located gas and water gathering lines would travel from the gas metering station on each well pad to an existing gas gathering line set in the pipeline ROW. The gas gathering line would lead to the central delivery point (CDP) located in SESW Sec. 13, T12N, R89W.

New Frontier Energy has submitted an Individual Industrial Wastewater Application to the Water Quality Control Division of the Colorado Department of Public Health and Environment to allow surface discharge to the Little Snake River. Produced water disposal is currently authorized under a temporary CDPS Industrial General Minimal Discharge Permit COG600697 pending approval of the Individual Permit. If surface discharge is disallowed, then the produced water would be placed in a currently operating water gathering line and sent to the Moffat 26-12-89 SWD #1 injection well for disposal. The water gathering lines would travel from each well pad to an existing water disposal line set in the existing pipeline ROW.

Power for each pad would be obtained from existing power lines the cross Battle Mountain Company's property. The power lines would travel above ground and would be constructed to be raptor safe.

Total surface disturbance for the proposed action would be approximately 30 acres.

**NO ACTION ALTERNATIVE:** The “no action” alternative would be that the wells and access road would not be authorized and therefore no wells would be drilled. New Frontier Energy, Inc. holds a valid and current oil and gas lease for the area where the proposed wells 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 APD process is designed to overcome the no action situation of not accepting the APD through the mitigation of predicted environmental consequences. Since the proposed action is consistent with the ROD and the Oil and Gas Leasing EIS, rejecting the APDs for these wells was considered but 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. The proposed action will not adversely affect the regional air quality.

Mitigative Measures: None.

Name of specialist and date: Shawn Wisler 02/05/08

## **AREA OF CRITICAL ENVIRONMENTAL CONCERN**

Affected Environment: Not present.

Environmental Consequences: None.

Mitigative Measures: None.

Name of specialist and date: Rob Schmitzer 02/19/08

## **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, New Frontier Energy Six CB Natural Gas Wells, has undergone a Class III cultural resource survey:

Zier, Christian

2007 Addendum to the Class II Cultural Resource Inventory of the Roubidoux Right of Way and the New Frontier Energy Rattlesnake POD in Moffat County, Colorado and Carbon County, Wyoming.

Mueller, Andrew

2007 A Class II Cultural Resource Inventory of the Roubidoux Right-of-Way and the New Frontier Energy Rattlesnake POD in Moffat county, Colorado and Carbon County, Wyoming. (BLM# 66.1.07)

Mueller, Andrew, Christopher C. Kinneer, Cody M. Anderson, Mary W. Painter

2008 A Class III Cultural Resource Inventory of the New Frontier Energy Rattlesnake POD in Moffat County, Colorado (BLM#66.1.08)

The survey identified one eligible to the National Register of Historic Places cultural resources (5MF973). The proposed project may proceed as described in this EA with the following mitigative measures in place.

Mitigative Measures:

5MF973 must be avoided by all project activities. Well pad construction on the southwestern portion of the proposed BM Fed 15-15 must stop at 20 m from the site boundary. An archeological site monitor must be present during the construction of BM Fed 15-15 to ensure the site is not damaged.

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 07/21/08

## **ENVIRONMENTAL JUSTICE**

Affected Environment: The proposed action would be located in an area of isolated dwellings. Ranching, farming and oil and gas development 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 impacts of the proposed action. 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: Mike Andrews 02/13/08

## **FLOOD PLAINS**

Affected Environment: Active floodplains and flood prone zones are avoided.

Environmental Consequences: No threat to human safety, life, welfare, or property would result from the proposed action.

Mitigative Measures: None.

Name of specialist and date: Shawn Wiser 02/05/08

## **INVASIVE, NONNATIVE SPECIES**

Affected Environment: Invasive species and noxious weeds occur within the affected area. Downy brome (cheatgrass), yellow alyssum, blue mustard and other annual weeds are common along roadsides, on well pads and on other disturbed areas. Canada thistle and several species of biennial thistles are known to occur in this area. Russian knapweed, spotted knapweed, Mediterranean sage, perennial pepperweed (tall whitetop), dalmation toadflax, yellow toadflax, leafy spurge, hoary cress (whitetop) and halogeton exist in the vicinity of these proposed well pads. Other species of noxious weeds are not known to be a problem in this area, but could be introduced from other areas. The BLM, Moffat County, livestock operators, pipeline companies and oil and gas operators have formed the Northwest Colorado Weed Partnership to collaborate their efforts on controlling weeds and finding the best integrated approaches to achieve these results.

Environmental Consequences: The surface disturbing activities and associated traffic involved with drilling these 6 wells, constructing the access road, constructing the utilities corridor and other subsequent activities would create a favorable environment and provide a mode of transport for annual and noxious weeds to become established. These weeds can be spread through a variety of means including by vehicular travel, construction equipment, gravel applications on roads, wind, water, wildlife and livestock movement. The annual invasive weed species (yellow alyssum, blue mustard and other annual weeds) occur on adjacent rangelands 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 would also occupy the disturbed areas, but this weed species would require intensive control with herbicides to prevent it from moving into adjacent rangelands, where it is presently uncommon. 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.

Mitigation attached as Conditions of Approval to minimize disturbance and obtain successful interim reclamation of the unused areas of the well pads and the access roads, 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.

Mitigative Measures: None

Name of specialist and date: Ole Olsen            02/29/08

## **MIGRATORY BIRDS**

Affected Environment: Brewers sparrow and sage sparrows are two birds listed on the U.S. FWS' 2002 Birds of Conservation Concern list that could be found within the project area.

Environmental Consequences: Activities associated with access road and well pad development and the drilling of the well could result in nest destruction and abandonment if conducted during the nesting season (May – August) there is a slight chance a nest could be present and impacted by these activities. Timing restrictions in place for greater sage-grouse and Columbian sharp-tailed grouse would help reduce the potential for this to occur. Chance of take is low.

Recent studies have indicated that birds have entered heater treater facilities through open vents. Birds have been entrapped and have died in these facilities as a result of gasses held in the facilities.

Mitigative Measures: All open vent stack equipment such as heater treaters, separators, dehydration units, and flare stacks would be designed and constructed to prevent birds and bats from entering or nesting in or on such units, and to the extent practical, to discourage birds from perching on the stacks.

Name of specialist and date: Timothy Novotny 07/16/08

### **NATIVE AMERICAN RELIGIOUS CONCERNS**

A letter was sent to the Uinta and Ouray Tribal Council, Southern Ute Tribal Council, Ute Mountain Ute Tribal Council on May 5, 2008. The letter listed the FY08 and FY09 projects that the BLM would notify them on and projects that would not require notification. A follow up phone call was performed on June 16, 2008. 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 07/21/08

### **PRIME & UNIQUE FARMLANDS**

Affected Environment: Not Present.

Environmental Consequences: None.

Mitigative Measures: None.

Name of specialist and date: Shawn Wiser 02/05/08

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

Affected Environment: There are no threatened or endangered species or habitat for such species within the proposed project area. The project area contains nesting habitat for bald eagle, greater sage-grouse and Columbian sharp-tailed grouse. All three of these species are BLM special status species. An active bald eagle nest would be located near the proposed project area. The Fed 14-15 and Fed 14-11 well would be located just over 6/10ths of a mile from this nest site. The nearest active greater sage-grouse lek would be located within 2 miles of the Fed 15-9, Fed 15-15 and Fed 22-1 wells. The nearest Columbian sharp-tailed grouse lek would be located over 2 ½ miles from the closest proposed well site.

Environmental Consequences: There would be no surface disturbing activities within ½ mile of the bald eagle nest. There would be sufficient distance to ensure that the nest site and nesting eagles are not disturbed as a result of the proposed action. No greater sage-grouse or Columbian sharp-tailed grouse lek sites would be impacted by this project. The proposed wells would all be located within potential greater sage-grouse and Columbian

sharp-tailed grouse nesting habitat. If development were to occur during the nesting season for either species, nest destruction or abandonment may occur. This would be a negative impact to nesting birds, but not likely to impact either species populations significantly. In order to avoid impacting active nest sites for both species, no surface disturbing activities should occur between March 1 and June 30. While individual well developments would not likely have long term negative impacts to either species populations, the development of six new wells, along with wells that have already been developed in the area, would likely have a negative impact on both greater sage-grouse and Columbian sharp-tailed grouse. The six wells proposed in this alternative would result in the direct loss of approximately thirty acres of nesting habitat for these species. These wells would likely result in further avoidance of the project area by both species. This would result in a negative impact to both species ability to reproduce in the project area.

Mitigative Measures: CO-30: No surface disturbing activities between March 1 and June 30 in order to protect nesting greater sage-grouse and Columbian sharp-tailed grouse.

Name of specialist and date: Timothy Novotny 7/16/08

## **T&E AND SENSITIVE PLANTS**

Affected Environment: There are no federally listed threatened or endangered or BLM sensitive plant species present within or in the vicinity of any of the six proposed wells.

Environmental Consequences: None.

Mitigative Measures: None.

Name of specialist and date: Hunter Seim 02/13/08

## **WASTES, HAZARDOUS OR SOLID**

Affected Environment: The operator has indicated in the APD for the well that some hazardous materials would be used during drilling, completion, and production of the proposed well. The term hazardous materials as used here means: 1) any substance, pollutant, or contaminant (regardless of quantity) listed as hazardous under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) of 1980, as amended, 42 U.S.C. 9601 et seq., and the regulations issued under CERCLA, 2) any hazardous waste as defined in the Resource Conservation and Recovery Act (RCRA) of 1976, as amended, and 3) any nuclear or nuclear byproduct as defined by the Atomic Energy Act of 1954, as amended, 42 U.S.C. 2011 et seq.

The operator or any contracted company working for the operator would have Material Data Safety Sheets available for all chemicals, compounds, or substances which are used during the course of construction, drilling, completion, and production operations for this

project. Additionally, all chemicals would be handled in an appropriate manner to minimize the potential for leaks or spills to the environment.

Environmental Consequences: Impacts to soils, surface and groundwater resources, wildlife, vegetation, and human health, could result from the accidental exposure of hazardous materials. Project operations should comply with all applicable federal and state laws concerning hazardous materials, the Hazardous Materials Management Summary for this project, and the operator's Spill Prevention Control and Countermeasure Plan.

Mitigative Measures: None.

Name of specialist and date: Shawn Wisner 02/05/08

### **WATER QUALITY – GROUND**

Affected Environment: Cretaceous Mesa Verde Formation (mostly covered by alluvium)

Environmental Consequences: Potential for increased run-off due to site construction.

Mitigative Measures: Operator committed measures would offset potential impact.

Name of specialist and date: Marilyn D. Wegweiser 02/19/2008

### **WATER QUALITY – SURFACE**

Affected Environment: The project area would be located on the hills south of the Little Snake River near Slater, CO. Topographically, the area is typified by isolated peaks, buttes, and mountain ridge fingers. Water is abundant and numerous perennial and intermittent streams flow through the project area toward the river. Runoff water from the project area would flow in a northeasterly and westerly direction through several unnamed drainages, Kilgore Gulch and Slater Creek, all tributaries of the Little Snake River. The Little Snake River within the affected environment must have water quality sufficient to support Aquatic Life Cold 1, Recreation 1a, Water Supply and Agriculture. Tributaries of the Little Snake River, when they flow water, must support the same beneficial uses. All stream segments within the affected environment are presently supporting their classified uses.

Environmental Consequences: Impacts from construction would be greatest shortly after the project starts and would decrease in time as a result of stabilization through revegetation and reclamation of disturbed areas. Increased sedimentation to the Little Snake River during spring runoff or from high intensity summer/fall rainstorms would be the greatest potential impact to water quality. Although some sediment may be transported off site and eventually reach perennial waters, the mitigation provided in the Surface Use Plan and the Conditions of Approval would reduce the potential impacts caused by surface runoff to an acceptable level.

Mitigative Measures: None.

Name of specialist and date: Shawn Wiser 02/08/08

### **WETLANDS/RIPARIAN ZONES**

Affected Environment: There are no wetlands or riparian zones within the proposed project area.

Environmental Consequences: None.

Mitigative Measures: None.

Name of specialist and date: Timothy Novotny 07/16/08

### **WILD & SCENIC RIVERS**

Affected Environment: Not Present.

Environmental Consequences: Not Applicable.

Mitigative Measures: Not Applicable.

Name of specialist and date: Rob Schmitzer 02/19/08

### **WSAs, WILDERNESS CHARACTERISTICS**

Affected Environment: Not Present.

Environmental Consequences: Not Applicable.

Mitigative Measures: Not Applicable.

Name of specialist and date: Rob Schmitzer 02/19/08

### **NON-CRITICAL ELEMENTS**

#### **FLUID MINERALS**

Affected Environment: Cretaceous Mesa Verde Rocks and subsequently older fluid bearing rock units.

Environmental Consequences: None.

Mitigative Measures: None.

Name of specialist and date: Marilyn D. Wegweiser 02/19/08

## **SOILS**

Affected Environment: The proposed BM Fed #14-05, #14-11, #14-15, and #15-9 well sites would be found within the Evanot-Yamo complex soil-mapping unit. Slopes within this unit average 3 to 20 percent. These soils are found on hills and are very deep and well drained. They formed in loess. Runoff is rated as medium and the hazard of water erosion is moderate. The hazard of soil blowing is slight.

The proposed BM Fed #15-15 and #22-01 well sites would be found within the Rock-River Taffon complex soil-mapping unit. Slopes within this unit average 3 to 20 percent. These soils are found on shallow slopes and are well drained.

A portion of the proposed access road would be found within the Yellow wash-Piezon complex soil-mapping unit. Slopes within this unit average 5 to 15 percent. These soils occupy areas where the vegetation is dominated by grasses. The Piezon soils occupy areas where the vegetation is dominated by Wyoming big sagebrush that collects snow and creates a moister environment. The soils occur on well drained slopes with very high runoff.

Environmental Consequences: The construction and operation of the proposed action would affect soils within and immediately adjacent to the proposed area of disturbance. Road and well pad construction would follow the design standards and recommendations outlined in the Surface Operating Standards for Oil and Gas Development, 4th Edition.

Increased soil erosion from wind and water would occur during construction of the well pads, access roads, and utility corridors. Erosion would continue throughout the operational life of the wells. 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 30 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 erosion would be reduced to an acceptable level with mitigation described in the Surface Use Plan and Conditions of Approval in the approved APD. Soil loss from construction would be greatest shortly after the project starts and would decrease in time as a result of stabilization through revegetation and reclamation of disturbed areas.

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 roads, well pads, or utility corridors.

Name of specialist and date: Shawn Wiser 02/08/08

## UPLAND VEGETATION

Affected Environment: The proposed action would be located in a Deep Loam ecological site. Dominant shrub species of the upland community include Wyoming big sagebrush (*Artemisia tridentata wyomingensis*), serviceberry (*Amelanchier alnifolia*), and green rabbitbrush (*Chrysothamnus viscidiflorus*). Dominant grasses include western wheatgrass (*Agropyron smithii*), prairie junegrass (*Koeleria macrantha*), needle and thread (*Hesperostipa comata*), and Sandberg bluegrass (*Poa sandbergii*). Dominant forbs include scarlet globemallow (*Sphaeralcea coccinea*), arrowleaf balsamroot (*Balsamorhiza sagittata*), Nuttall's larkspur (*Delphinium nuttallianum*), longleaf phlox (*Phlox longifolia*), and lupine (*Lupinus spp.*). Some other species found on this proposed site include false dandelion (*Agoseris glauca*), prickly pear (*Opuntia spp.*), blue flax (*Linum lewisii*), death camas (*Zigadenus elegans*), yarrow (*Achillea millifolium*), and common dandelion (*Taraxicum officinale*).

Environmental Consequences: The proposed action would impact a very small portion of the upland plant community. This impact would be very minimal within the larger landscape and not adversely impact the upland community as a whole.

Mitigative Measures: None.

Name of specialist and date: Christina Rhyne 02/12/08

## WILDLIFE, TERRESTRIAL

Affected Environment: The proposed project area provides year round habitat for mule deer, elk and pronghorn antelope including severe winter habitat for mule deer and elk. A variety of small mammals, songbirds and reptiles can be found within the project area as well.

Environmental Consequences: Most of big game animals would choose to avoid the project area due to heavy human activity that is associated with oil and gas production in the area. A few individuals that are accustomed to the heavy activity likely use the project area. The development of these wells would result in the loss of approximately 30 acres of habitat. This in itself is not sufficient to impact big game animals. Cumulatively, every well that is placed in this area would likely further reduce the suitability of this area for all three species. In order to protect wintering mule deer and elk, no surface disturbing activities should be conducted between December 1 and April 30.

Small mammals such as rabbits do not appear to have been impacted by the development which has occurred in the project area. Construction activities associated with access roads and well pad development could result in the entrapment and death of burrowing mammals and reptiles. If conducted during the nesting period (February – August) these activities could result in nest abandonment or destruction. This would not result in any negative impacts to any species populations.

Mitigative Measures: CO-09: No surface disturbing activities between December 1 and April 30 in order to protect wintering mule deer and elk.

Name of specialist and date: Timothy Novotny 07/16/08

**OTHER NON-CRITICAL ELEMENTS:**

Non-Critical Element	NA or Not Present	Applicable or Present, No Impact	Applicable & Present and Brought Forward for Analysis
Forest Management		SW 02/08/08	
Hydrology/Ground		MDW 02/19/08	
Hydrology/Surface		SW 02/08/08	
Paleontology		MDW 02/19/08	
Range Management		CR 02/12/08	
Realty Authorizations	MAA 02/13/08		
Recreation/Transportation		RS 02/19/08	
Socio-Economics		MAA 02/13/08	
Solid Minerals		JAM 02/12/08	
Visual Resources		RS 2/19/08	
Wild Horse & Burro Mgmt	SW 02/08/08		
Wildlife, Aquatic	TN 07/16/08		

**CUMULATIVE IMPACTS SUMMARY:** Cumulative impacts may result from the development of the wells 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 Slater, CO area. Currently 11 producing wells exist within the area of the proposed wells. Other past or existing actions near the project area that have influence on the landscape are wildfire, hunting, grazing, and ranching activities.

Surface disturbance associated with oil and gas activity would increase the potential for erosion and sedimentation. Only a small reduction in available forage would be anticipated. Some wildlife species may be temporarily displaced by construction at the well sites, access roads, powerlines, and future pipeline routes, but should return once construction is completed. 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.

The cumulative effects of projected oil and gas development are minimized through Best Management Practices identified in the Surface Use Plan of the APD and the BLM required

mitigation in the Conditions of Approval for the APD. Proper construction and drilling practices must comply with federal and state environmental regulations. All oil and gas wells in the area would be completed in accordance with Onshore Order No. 2. Reasonably foreseeable mineral development would occur under the guidelines of the Little Snake Resource Management Plan and the Colorado Oil and Gas Leasing and Development EIS.

**STANDARDS:**

**PLANT AND ANIMAL COMMUNITY (animal) STANDARD:** Existing oil and gas development in and around the project area has had an impact on the project areas ability to support healthy productive wildlife populations. The addition of six new wells would further diminish this areas ability to support wildlife. Timing restrictions would help reduce direct impacts to wildlife species but would not protect habitats within the project area. Cumulative impacts from oil and gas development in this area are likely to have negative impacts to wildlife habitats. This standard is currently being met but may not be capable of being met in the future once these six wells are developed.

Name of specialist and date: Timothy Novotny 07/16/08

**SPECIAL STATUS, THREATENED AND ENDANGERED SPECIES (animal) STANDARD:** There are no threatened or endangered species or habitats for such species within the project area. The project area does provide nesting habitat for bald eagles, greater sage-grouse and Columbian sharp-tailed grouse, all three species are BLM special status species. The development of six the six wells would not likely to impact the bald eagle nest site. These wells would result in the direct loss of approximately 30 acres of nesting habitat for greater sage-grouse and Colombian sharp-tailed grouse. Additional nesting habitat is likely to be avoided by these species if the wells are brought into production. With the impacts associated with existing development surrounding the project area, it is likely that cumulative impacts would make the area less suitable for both species. This standard is currently being met but may not be capable of supporting nesting activities for either species in the future.

Name of specialist and date: Timothy Novotny 07/16/08

**PLANT AND ANIMAL COMMUNITY (plant) STANDARD:** The Proposed Action would result in a small, localized surface disturbance which would not disturb the larger plant community. This level of disturbance would not prevent the community from maintaining resilience to other activities and disturbances. The plant community currently meets this standard and the Proposed Action would not prevent the community from meeting this standard in the future.

Name of specialist and date: Christina Rhyne 02/12/08

**SPECIAL STATUS, THREATENED AND ENDANGERED SPECIES (plant) STANDARD:** There are no federally listed threatened or endangered or BLM sensitive plant

species present within or in the vicinity of any of the six proposed wells. This standard does not apply.

Name of specialist and date: Hunter Seim 02/13/08

**RIPARIAN SYSTEMS STANDARD:** There are no wetlands or riparian zones within the proposed project area. This standard does not apply.

Name of specialist and date: Timothy Novotny 07/16/08

**WATER QUALITY STANDARD:** The proposed action would meet the public land health standard for water quality. Reclamation of the pipeline corridors would be completed immediately after installation to minimize sheet and rill erosion from the corridor. Interim reclamation of the unused area on the well pads would be completed to minimize sheet and rill erosion from the well sites. When the well pads are no longer needed for production operations, the disturbed well pads and access roads would be reclaimed to approximate original contours, topsoil would be redistributed, and adapted plant species would be reseeded. These Best Management Practices would help to reduce accelerated erosion of the sites. No stream segments near this project are listed as impaired.

Name of specialist and date: Shawn Wiser 02/05/08

**UPLAND SOILS STANDARD:** The proposed action would not meet the upland soil standard for land health, but it is not expected to while the well locations, pipelines, and access roads are used for operations. The well pad sites, pipeline corridors, and access roads would not exhibit the characteristics of a healthy soil. Several Best Management Practices have been designed into the project or are attached as mitigating measures that would reduce impacts to and conserve soil materials. Upland soil health would return to the well pad, pipeline corridor, and access road disturbances after reclamation practices and well abandonments have been successfully achieved.

Name of specialist and date: Shawn Wiser 02/05/08

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

**FINDING OF NO SIGNIFICANT IMPACT (FONSI)**  
**EA CO-100-2007-074**

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 APD is in conformance with the approved land use plan. It is my decision to implement the project with the mitigation measures provided in the Application for Permit to Drill and the Conditions of Approval. Right-of-Way Grant COC73008 will be issued to New Frontier Energy, Inc. (See Attachment 1). 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 APD 12-point surface use plan, well location maps, and the Conditions of Approval are found in the well case file labeled COC69110: BM Fed Well #14-15, #15-09, #15-15, COC69111: BM Fed Well #14-05 and #14-11, and COC61759: BM Fed Well #22-01. ROW stipulations and maps for Grant COC73008 issued to New Frontier Energy, Inc. are in the serialized case files.

**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:**