

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-100-2008-012 EA

CASEFILE/PROJECT NUMBER/LEASE NUMBER:

COC067815: Lancelot Well # 32-14
COC71259: Access Road Right-of-Way (ROW)

PROJECT NAME: Julander Lancelot Well

LEGAL DESCRIPTION: Moffat County, Colorado

Lancelot Well # 32-14: SWNE Sec. 14, T10N, R99W, 6th PM, Moffat County, Colorado
Access Road ROW: T.10N., R.98W., Sec. 18, Lot 7, NW¹/₄SE¹/₄SW¹/₄; T.10N.,
R.99W., Sec. 11, SE¹/₄NE¹/₄SE¹/₄, SE¹/₄SW¹/₄SE¹/₄, N¹/₂SE¹/₄SE¹/₄, SW¹/₄SE¹/₄SE¹/₄; Sec. 12,
SW¹/₄NE¹/₄SW¹/₄, S¹/₂NW¹/₄SW¹/₄, NE¹/₄SE¹/₄SW¹/₄, W¹/₂SW¹/₄SE¹/₄; Sec. 13,
SW¹/₄NE¹/₄NE¹/₄, NW¹/₄NE¹/₄, SE¹/₄NE¹/₄, NE¹/₄NE¹/₄SE¹/₄; 6th PM, Moffat County,
Colorado

APPLICANT: Julander Energy Company

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 well would be located within Management Unit 3 (Little Snake Resource Management Plan). The objectives of Management Unit 3 are to improve soil and watershed values, increase forage production, and enhance livestock grazing. Public lands are open to oil and gas leasing and development consistent with the management objectives. 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 Notice of Staking (NOS) has been posted in the public room of the Little Snake Field Office for a 30-day public review period beginning November 14, 2007 when the NOS was 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 one Application for Permit to Drill (APD) submitted by Julander Energy Company. This oil and gas lease operator proposes to drill one natural gas well on BLM administered land located in T10N, R99W. An APD has been filed for the Lancelot Well # 32-14 in the SWNE Section 14, T10N, R99W with the LSFO that includes drilling and surface use plans. The APD covers mitigation of impacts to vegetation, soil, surface water, and other resources. Mitigation not incorporated by Julander Energy Company in the drilling and surface use plans would be attached by the BLM as Conditions of Approval (COA) to an approved APD.

The proposed well would be located approximately 63 miles southwest of Baggs, Wyoming. The approximate date work would start is winter or summer of 2008 and the estimated duration of construction and drilling of the well is one month. Moffat County Roads 4, 67, 68, 126, and BLM roads 2058 and 2058AN would be used to access the well site. Julander has filed a right-of-way application, COC72159, for 12,250 feet of the off-lease portion of the access road (BLM roads 2058 and 2058 AN). One new short access road of 0.25 miles in length on lease would be constructed. Total surface disturbance for new road construction for the well would be approximately 1.0 acres. Julander proposes to upgrade approximately 0.6 mile of existing two-track road. Road construction would conform to BLM specifications for a “resource road,” with a 16-foot wide running surface. All new road construction and upgrading would occur on federally administered surface.

The proposed well pad would be cleared of all vegetation and leveled for drilling. Topsoil and native vegetation would be stockpiled for use in reclamation. Approximately 3.2 acres would be disturbed for the well pad during construction. This disturbance includes the 285’ by 400’ well pad, the topsoil pile, and subsoil piles to be constructed at the well site. A reserve pit would be constructed on the well pad to hold drill mud and cuttings. If the well is a producer, cut portions of the well site would be backfilled and unused portions of the well site would be stabilized and re-vegetated. If the well proves unproductive, the well would be properly plugged and the entire well pad and access road would be reclaimed.

Julander did not include plans for gas sales pipelines with the APD. A detailed written statement of work (Sundry Notice) would be filed with the BLM before pipeline installation. This Sundry Notice would be assessed, when it is received, for environmental impacts of a gas sales pipeline.

NO ACTION ALTERNATIVE: The “no action” alternative is that the well would not be permitted and therefore the well would not be drilled. Julander Energy Company holds valid and current oil and gas leases for the area where the proposed well 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 APD for the well 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 would not adversely affect the regional air quality.

Mitigative Measures: None.

Name of specialist and date: Roy McKinstry 12/03/07

AREA OF CRITICAL ENVIRONMENTAL CONCERN

Affected Environment: Not present.

Environmental Consequences: None.

Mitigative Measures: None.

Name of specialist and date: Rob Schmitzer 12/18/07

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, Julander Well #32-14, has undergone a Class III cultural resource survey:

Conner, Carl E. and Barbara J. Davenport
2007 Class III Cultural Resource Inventory Report for the Proposed Lancelot #32-14 Well Location and Related Short Access (925') in Moffat County, Colorado for Julander Energy Company (BLM#11.1.08)

Darlington, David
2007 Class III Cultural Resource Inventory for the Red Wine Resources, Inc., Lancelot Federal Unit No. 15-33 Well Pad, Access Road, and Pipeline Moffat County, Colorado.

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

Mitigative Measures: An archaeological monitor would be required to be present during construction activity. The two track road would be barricaded at the proposed eligible site boundary and it would be rerouted 0.25 miles to avoid site. The two track road would be blocked on the other end of the site as well. The newly constructed road and the improved two-track portion would be reclaimed to its former status as a two track road. The newly constructed portion would be reclaimed to match the two track road.

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 01/08/08

ENVIRONMENTAL JUSTICE

Affected Environment: The proposed action is located in an area of isolated dwellings. Ranching, farming and oil and gas development are the primary economic activities.

Environmental Consequences: The project area is 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 12/19/07

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: Roy McKinstry 12/03/07

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 and on other disturbed areas. Canada thistle and several species of biennial thistles are known to occur in this area. Halogeton, Russian knapweed and

hoary cress (whiteweed) are present in the vicinity of these projects. Other species of noxious weeds are not known to be a problem in this area, but they can always be introduced by vehicle traffic, livestock and wildlife. 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 the well, constructing the access road and other 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 these 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 (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 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 involved with drilling and operating the well.

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.

Mitigative Measures: None.

Name of specialist and date: Ole Olsen 01/15/08

MIGRATORY BIRDS

Affected Environment: Brewers sparrow and sage sparrows are two birds listed on the U.S. FWS's 2002 Birds of Conservation Concern list that could be found within the project area. Most of the project area has been treated with a brush beating which limits the areas value to Brewer's sparrow and sage sparrows. Two golden eagles nests occur with a half mile of the proposed well site. Significant topographic barriers exist between the nest sites and the well pad.

Environmental Consequences: It is unlikely that Brewer's sparrow or sage sparrows would choose to nest within the project area because of the brush beating treatment. Construction and drilling activities that are conducted outside of the nesting season would not impact either species. Chance of take is low.

Golden eagles are not likely to be impacted by the proposed action. Chance of take is low.

Mitigative Measures: None.

Name of specialist and date: Timothy Novotny 12/19/07

NATIVE AMERICAN RELIGIOUS CONCERNS

A letter was sent to the Uinta and Ouray Tribal Council, Southern Ute Tribal Council, Ute Mountain Ute Tribal Council, and the Colorado Commission of Indian Affairs on January 21, 1999. The letter listed the projects that the BLM would notify them on and projects that would not require notification. 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 01/08/08

PRIME & UNIQUE FARMLANDS

Affected Environment: Not Present.

Environmental Consequences: None.

Mitigative Measures: None.

Name of specialist and date: Roy McKinstry 12/03/07

T&E SPECIES – ANIMALS

Affected Environment: There are no threatened, endangered or special status species or habitat for such species present within or near the proposed project area.

Environmental Consequences: None.

Mitigative Measures: None.

Name of specialist and date: Timothy Novotny 12/19/07

T&E SPECIES – PLANTS

Affected Environment: There are no federally listed threatened or endangered plant species within or in the vicinity of the proposed project area.

Environmental Consequences: None.

Mitigative Measures: None.

Name of specialist and date: Hunter Seim 12/18/07

T&E SPECIES - SENSITIVE PLANTS

Affected Environment: There are no BLM sensitive plant species within or in the vicinity of the proposed project area.

Environmental Consequences: None.

Mitigative Measures: None.

Name of specialist and date: Hunter Seim 12/18/07

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: Roy McKinstry 12/03/07

WATER QUALITY/HYDROLOGY – GROUND

Affected Environment: Green River 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 12/19/07

WATER QUALITY/HYDROLOGY – SURFACE

Affected Environment: No springs would be affected by the well. The well is situated in the northwest portion of the Sand Wash Basin Herd Management Area (HMA). All stream segments near the well pad location are presently supporting classified beneficial uses. No impaired stream segments occur in the vicinity of the proposed action.

Environmental Consequences: Runoff water affected from the well project would flow into the ephemeral North Sand Wash. Increased sedimentation to Sand Wash, and the Little Snake River during spring runoff or from high intensity summer/fall rainstorms would be the greatest potential impact to water quality.

The well location would require new construction of one short access road. New road construction would conform to BLM specifications for a "resource road," with a 14-foot wide running surface. Construction of the road, well pad, and installation of drainage features would follow the guidelines provided in the Surface Operating Standards for Oil and Gas Development, 4th Edition. Although some sediment, salts, and other non-point source contaminants 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 to have excessive sediments and salts in runoff water from the site.

Mitigative Measures: None.

Name of specialist and date: Roy McKinstry 12/03/07

WETLANDS/RIPARIAN ZONES

Affected Environment: There are no wetlands or riparian zones near the proposed well location.

Environmental Consequences: None.

Mitigative Measures: None.

Name of specialist and date: Timothy Novotny 06/07/07

WILD & SCENIC RIVERS

Affected Environment: Not present.

Environmental Consequences: None.

Mitigative Measures: None.

Name of specialist and date: Rob Schmitzer 12/18/07

WILDERNESS, WSAs

Affected Environment: Not present.

Environmental Consequences: None.

Mitigative Measures: None.

Name of specialist and date: Rob Schmitzer 12/18/07

NON-CRITICAL ELEMENTS

FLUID MINERALS

Affected Environment: The proposed action is in favorability zone 4 (highest for oil and gas potential). This well would penetrate the Browns Park Formation, the Green River Formation, and then potentially all of the following downhole in stratigraphic sequence: the Wasatch, Fort Union, Lance, Lewis Shale, and Mesaverde Formations.

Summary:

The Browns Park and Green River Formations both have the potential to yield fresh water. The main body of the Wasatch consists of claystone, shale, mudstone, and sandstone. Samples from lower part of the Fort Union Formation at two localities in Rio Blanco Co, Colorado contained pollen that yielded Paleocene ages (Hail, 1990; 1993). Bituminous coal beds and stringers are found throughout the Wasatch (Tschudy, 1971), Fort Union, Lewis Shale, and Mesaverde Formations. These coal seams have little value as a mineable commodity, but could contribute to the production of coal bed methane (CBM) and therefore must be isolated and protected from communication. The Lewis Shale is of Campanian age based on Ammonite biostratigraphy and is coeval to the Meeteetse Formation of Wyoming (Roehler, 1993). The Mesaverde is considered to be of Campanian age based on palynomorphs (Scott, 1990). It consists of white and brown soft sandstone, gray sandy shale, coal, and carbonaceous shale (Love et al., 1995). The Mesaverde Formation overlies the Ericson Sandstone and underlies the Lewis shale, which is coeval to the Fox Hills Sandstone. It should be noted that the hydrology for coal bed methane production within the Sand Wash geologic basin is unfavorable even though the gas resource is large (Scott, et al., 1995). The Mesaverde (Almond) in this area is mainly coastal swamp and lagoon deposits with two transgressive shoreline deposits pinching out in a northwesterly direction near the top of the formation. It can be field identified, by the frequent presence of Ophiomorpha ichnofossils indicating a nearshore depositional environment, often conducive to hydrocarbon reservoir characteristics.

Environmental Consequences: None. The Drilling Plan follows Onshore Order #2. Operator committed measures in the Eight Point Drilling Plan will bring cement back to surface and cementing the production casing should prevent communication and commingling.

Mitigative Measures: None.

Name of specialist and date: Marilyn D. Wegweiser 12/19/07

References:

Hail, W.J., Jr., and Barnum, B.E., 1993, Geologic map of the Divide Creek quadrangle, Rio Blanco and Moffat Counties, Colorado: U.S. Geological Survey Miscellaneous Field Studies Map, MF-2232, 1 sheet, scale 1:24,000

Hail, W.J., Jr., 1990, Geology of the lower Yellow Creek area, northwestern Colorado, IN Evolution of sedimentary basins; Uinta and Piceance basins: U.S. Geological Survey Bulletin, 1787-O, p. O1-O45.

Love, J.D., Weitz, J.L., and Hose, R.K., 1955, Geologic map of Wyoming: U.S. Geological Survey, scale 1:500,000

Roehler, H.W., 1993, Stratigraphy of the Upper Cretaceous Fox Hills Sandstone and adjacent parts of the Lewis Shale and Lance Formation, east flank of the Rock Springs uplift, southwest Wyoming: U.S. Geological Survey Professional Paper, 1532, 57 p., 5 pl.,

(incl. geologic maps, scale 1:100,000)
[http://ngmdb.usgs.gov/Prodesc/proddesc_4923.htm]

Scott, R.W., Jr., and Pantea, M.P., 1990, Geologic map of the Texas Creek quadrangle, Rio Blanco County, Colorado: U.S. Geological Survey Miscellaneous Field Studies Map, MF-2134, 1 sheet, scale 1:24,000

Tschudy, R.H., 1976, Pollen changes near the Fort Union-Wasatch boundary, Powder River basin, IN Geology and energy resources of the Powder River [basin]: Wyoming Geological Association Field Conference Guidebook, no. 28, p. 73-81.

PALEONTOLOGY

Affected Environment: Green River Fm; Laney Shale and Brown's Park are possible (mostly covered by alluvium). PFYC Classification 4b. *Class 4* – High. Geologic units containing a high level of occurrence of significant fossils. Vertebrate fossils or scientifically significant invertebrate or plant fossils are known and documented to occur, but may vary in occurrence and predictability. Surface disturbing activities can adversely affect fossils in many cases. *Class 4b* – These are areas underlain by units with high potential but have lowered risks of human-caused adverse impacts and/or lowered risk of natural degradation due to tempering circumstances. The bedrock unit has high potential, but a protective layer of soil, thin alluvial material, or other conditions may lessen or prevent potential impacts to the bedrock resulting from the activity. Extensive soil or vegetative cover; bedrock exposures are limited or not expected to be impacted. Areas of exposed outcrop are smaller than two contiguous acres. Outcrops form cliffs of sufficient height and slope so that impacts are minimized by topographic effects. Other characteristics are present that lower the vulnerability of both known and unidentified fossil resources.

(1) A field survey by a qualified paleontologist is often needed to assess local conditions.

(2) Management prescriptions for resource preservation and conservation through controlled access or special management designation should be considered.

Environmental Consequences: Potential for impacts to vertebrate fossils during site construction.

Mitigative Measures: During onsite, ascertain potential depth of alluvium. If there is potential for bedrock to be impacted, request a qualified monitor.

Name of specialist and date: Marilyn D. Wegweiser 12/19/07

REALTY AUTHORIZATIONS

Affected Environment: There is one electric distribution line right-of-way, COC40635 held by Yampa Valley Electric Association, in the vicinity of the proposed action. The proposed action would have no impact on this existing right-of-way.

Julander Energy Company submitted a right-of-way application for 12,250 linear feet of the off-lease portion of the access road. The proposed access road overlaps existing designated BLM Roads #2058 and #2058AN. Any upgrading of the road would occur within previously disturbed surface.

Environmental Consequences: Any upgrading of the existing BLM designated roads would follow the design standards and guidelines in the Surface Operating Standards for Oil and Gas Development, 4th Edition (Gold Book). Road construction or upgrading would increase soil erosion. Adherence to the Gold Book design standards, Surface Use Plan and Conditions of Approval would reduce soil erosion to an acceptable level.

Mitigative Measures: None.

Name of specialist and date: Mike Andrews 01/09/08

SOILS

Affected Environment: The proposed well site and access road are found within the Fenster-Thenipel complex soil mapping unit. Slopes within this unit average 3 to 12 percent. These soils are moderately deep and well drained. They are formed in residuum derived siltstone. Runoff is rated as medium.

Environmental Consequences: The construction and operation of the well would affect soils within and immediately adjacent to the proposed areas 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 pad and access roads. Erosion would continue throughout the operational life of the well. 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 4.2 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 the mitigation described in the Surface Use Plan, and Conditions of Approval in the approved APD. 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.

Mitigative Measures: None.

Name of specialist and date: Roy McKinsty 12/03/07

VEGETATION

Affected Environment: The proposed well is located within a sagebrush-grass plant community. Most of the site was brushbeaten in 2002 so much of the big sagebrush is absent and the grass and forb component is in higher densities than surrounding un-treated areas. Dominant plants present include Wyoming big sagebrush (*Artemisia tridentata wyomingensis*), shadscale saltbush (*Atriplex confertifolia*), Nuttall's saltbush (*A. nutallii*), winterfat (*Ceratoides lanata*), spiny hopsage (*Grayia spinosa*), Hood's phlox (*Phlox hoodii*), Indian ricegrass (*Oryzopsis hymenoides*), squirreltail (*Sitanion hystrix*), western wheatgrass (*Agropyron smithii*), and Sandberg bluegrass (*Poa sandbergii*). The site exhibits high utilization on wheatgrass, low utilization on other grasses, and high horse sign. The site is progressing well from the brushbeating, with good vigor throughout. The site also exhibits high levels of non-native halogeton (*Halogeton glomeratus*), tansy mustard (*Descurania pinnata*), and cheatgrass (*Bromus tectorum*).

Environmental Consequences: The proposed well and access road would completely remove approximately 4.2 acres of native vegetation. This disturbance would be minimal within the larger plant community and would not result in substantial changes to the character or function of the overall plant community. This proposal would occur mostly within an area that was treated to improve age-class diversity within the shrub component of the community. The area treated was several hundred acres spread across several thousand acres and this impact would not affect the overall purpose or effectiveness of the brushbeating. As long as required weed control and reclamation practices are followed, the direct impact of vegetation removal and indirect impact of increased weed presence would be greatly minimized.

Mitigative Measures: None.

Name of specialist and date: Hunter Seim 12/18/07

WILD HORSE & BURRO MANAGEMENT

Affected Environment: The proposed well would be in the Sand Wash wild horse herd management area (HMA). The Sand Wash HMA population as of September 2007 was 386 wild horses.

The majority of wild horse mares in the Sand Wash herd foal between March and the end of June. Mares that are soon-to-foal often leave their band and isolate themselves during foaling, and for a number of hours following foaling. Newly born foals are on their feet within a few hours after birth but are unable to travel any distance for at least 48 hours.

Newborn foals are vulnerable to human disturbance. Mares vary in their maternal instincts. While the majority of mares cannot easily be separated from their foals, young mares, and mares with less maternal instinct may leave their foals if the rest of their band is spooked and runs, or if the mare is spooked when she is alone with a newborn foal. Newborn foals less than 2 months of age will not survive without their mare. Foals between 2 and 4 months rarely survive when separated from their mare.

Environmental Consequences: The highest likelihood of impacts to the herd would occur during foaling season (March through June), and during the dry summer and early fall months (mid-July through September). Foals could become separated from their mares when bands are spooked by human presence associated with the proposed action, or could be trampled by other horses in the band when the band runs from human disturbance.

Increased human and motorized activity associated with the proposed action could disrupt and displace wild horses. Wild horses try to avoid motor vehicle movement and human activities within their range. Oil and gas activities within the Sand Wash HMA may cause wild horses to alter their distribution patterns and concentrate in areas with less human disturbance which may lead to over utilization of forage in these areas. Energy development in the HMA may lead to an overall reduction in the quantity and quality of wild horse forage and habitat. As the forage and habitat is reduced, competition for remaining habitat may increase between wild horses, livestock, and wildlife.

Traffic adjacent to established wild horse and big game trails leading to water, or traffic crossing over preferred wild horse/big game trails, as well as human presence in close proximity to water sources could result in undue stress to the horse bands, particularly to wet mares, young foals, and old horses. Bands would either have to wait for human disturbance to leave the water sources, or they would be forced to travel to other available water locations. Horse bands at unfamiliar water sources would be forced to compete with resident bands. The result of increased fighting between bands could result in heightened foal mortality, adult injury, and disruption of band integrity.

If the well does not produce, direct impacts would cease following reclamation of the well site, and the departure of humans and equipment. Horses may benefit from increased forage resulting from the disturbed areas being successfully reclaimed after drilling completion.

Mitigative Measures:

1. To protect wild horses during foaling season no helicopter or motor vehicle use is allowed for construction or drilling operations in the wild horse herd management area between March 2 and June 30.
2. To decrease the likelihood of wild horses being displaced from dependable water sources, employees will not camp or leave vehicles parked on developed or undeveloped water sources in the HMA.

Name of specialist and date: Kathy McKinstry 12/03/07

WILDLIFE, TERRESTRIAL

Affected Environment: The proposed action is in an area providing year round habitat for mule deer, elk and pronghorn antelope in all but the most severe winters. The project area is also capable of supporting a variety of song birds, reptiles and small mammals. The majority of the well pad site and proposed new access road would be built within a brush beating treatment.

Environmental Consequences: The construction of the well pad and its associated access road would result in the loss of approximately 4.2 acres of potential wildlife habitat. Drilling and construction activities associated with the proposed action would displace big game animals from the project area. Surrounding undisturbed habitats are capable of supporting displaced animals while these activities are occurring. Once completed, many displaced animals would return to the area surrounding the well site.

Small mammals, songbirds and reptiles could be displaced from the project area during construction and drilling. Most of these animals are capable of avoiding construction equipment and would not be harmed. It is possible that construction activities associated with well pad and access road development would destroy songbird nests if conducted during the nesting season (May through August). If conducted outside of this time period, song birds would not be harmed.

Mitigative Measures: None.

Name of specialist and date: Timothy Novotny 12/19/07

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	RM 12/03/07		
Hydrology/Ground		MDW, 12/19/07	
Hydrology/Surface		RM 12/03/07	
Paleontology		MDW 12/19/07	See Paleontology
Range Management		JHS 12/18/07	
Realty Authorizations			See Realty Authorizations
Recreation/Transportation		RS 12/18/07	
Socio-Economics		MAA 12/19/07	
Solid Minerals		RM 01/24/09	
Visual Resources		RS 12/18/07	

Wild Horse & Burro Mgmt			See Wild Horse
Wildlife, Aquatic	RM 01/24/08		

CUMULATIVE IMPACTS SUMMARY: Cumulative impacts may result from the development of the well 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 Sand Wash area. Currently no producing wells exist within a one-mile radius of the proposed well. Other past or existing actions near the project area that could have influence on the landscape include wildfire, recreation, wild horses, hunting, grazing, and ranching activities. Continued exploration activity and successful drilling has the strong potential to disrupt the natural behavior of wild horses in the HMA. Increased exploration and mining activity, when coupled with increases in recreational activity, has the potential of critically displacing and disrupting the behavior of horses in the herd. Continued increases in drilling and recreational activity could be mitigated through completion of an Environmental Impact Statement analyzing the long term effects of human pressure on wild horses in this HMA.

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 and wild horses may be temporarily displaced by construction at the well site, access road, 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: The proposed project area provides suitable wildlife habitat for a variety of wildlife species. The proposed action would result in a temporary displacement of most wildlife using the area during construction and drilling activities. Most wildlife would be capable of moving back into the project area once these activities are completed. There would be a loss of approximately 4.2 acres of wildlife habitat as a result of this project. This standard is currently being met and would continue to be met in the future.

Name of specialist and date: Timothy Novotny 12/19/07

SPECIAL STATUS, THREATENED AND ENDANGERED SPECIES (animal)

STANDARD: There are no threatened, endangered or special status species or habitat for such species present within the proposed project area. This standard does not apply.

Name of specialist and date: Timothy Novotny 12/19/07

PLANT AND ANIMAL COMMUNITY (plant) STANDARD: Plant community health indicators such as vigor, diversity, and overall community composition are sufficient for this area to meet this standard. The proposed action would remove vegetation and provide habitat for the expansion of existing weeds in the area, but application of required weed control and reclamation practices would greatly minimize this impact and, thus, meet this standard.

Name of specialist and date: Hunter Seim 12/18/07

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 action. For plants, this standard does not apply.

Name of specialist and date: Hunter Seim 12/18/07

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

Name of specialist and date: Timothy Novotny 12/19/07

WATER QUALITY STANDARD: The proposed action would meet the public land health standard for water quality. Interim reclamation of the unused area on the well pad would be completed to minimize sheet and rill erosion from the well site. When the well pad and access road are no longer needed for production operations, the disturbed area would be reclaimed. No stream segments near this project are listed as impaired.

Name of specialist and date: Roy McKinstry 12/03/07

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 well pad and access road are used for drilling and production operations. The disturbed area would not exhibit characteristics of a healthy soil. Mitigation detailed in the APD and standards from the “Gold Book” would help to reduce erosion. Upland soil health would return to the well pad and access road after the project area has been successfully reclaimed.

Name of specialist and date: Roy McKinstry 12/03/07

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-100-2007-012

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. 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 COC67815, Lancelot Well # 32-14.

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: