

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-100-2006-038 EA

CASEFILE/PROJECT NUMBER/LEASE NUMBER: COC61496

PROJECT NAME: Two Kaline Unit Wells

LEGAL DESCRIPTION: Both wells in Moffat County, Colorado

Kaline Unit Well #8: Lot 19 Section 23, T12N, R94W, 6th PM
Kaline Unit Well #17: Lot 20 Section 23, T12N, R94W, 6th PM

APPLICANT: Yates Petroleum 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 Two Kaline Unit Wells would be located within Management Unit 6 (Little Snake Resource Management Plan). The objectives of Management Unit 6 are to maintain and improve critical habitat for sage grouse, mule deer, and pronghorn antelope. Public lands are open to oil and gas development consistent with the management objectives.

The proposed action has been 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 January 11, 2006 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 two Applications for Permit to Drill (APD) submitted by Yates Petroleum Corporation. Yates proposes to drill two coalbed natural gas wells on BLM administered land located in T12N, R94W. Two APDs have been filed with the LSFO for the wells, the Kaline Unit Well #8 and the Kaline Unit Well #17. 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 Yates in the drilling and surface use plans would be attached by the BLM as Conditions of Approval to the approved APDs.

The proposed wells are located approximately 21 miles southwest of Baggs, Wyoming. Construction work is planned to start in the summer of 2006 and the estimated duration of construction and drilling is 30 days for each well. Moffat County Roads 4 and 91 would be used to access the wells. A new access road of approximately 3,218 feet would be constructed for the wells. Total surface disturbance for new road construction would be approximately four (4) acres. All new road construction would be on lease and on BLM surface. No upgrading to MCR 4 or MCR 91 is anticipated. A federal right-of-way is not required.

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. Approximately two (2) acres would be disturbed for construction of each of the well pads. This would include the 270' by 205' well pads, the topsoil, and subsoil piles. A reserve pit would be constructed on each of the well pads to hold drill mud and cuttings. If a gas 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 a gas well proves unproductive, it would be properly plugged and the entire well pad and access road would be reclaimed.

Yates did include plans for gas sales pipelines with the APDs. Approximately 4570 feet of new gas pipeline would be installed and connected to an existing gas pipeline at the Kaline Unit Well #12 in the SENW Sec. 23, T12N, R94W to service the wells once production is established. Each well would have its own gas pipeline buried in the same corridor. New gas pipeline installation would be buried and occur within and adjacent to the new access road construction and MCR 91. All gas pipeline construction would be on federal surface and on lease or on State of Colorado surface; a federal right-of-way is not required.

The produced water from both proposed well locations would be transported by a buried water pipeline to the Kaline Unit Well #5 water disposal well located on State of Colorado land in the NENW Section 23, T12N, R94W. Approximately 4570 feet of new water pipeline would be installed and connected to an existing water disposal pipeline at the Kaline Unit Well #12 in the SENW Sec. 23, T12N, R94W. Each well would have its own water pipeline buried in the same corridor. New water pipeline installation would occur within the gas pipeline corridor. The tie-in point for both water and gas pipelines would be near the Kaline Unit Well #12 in the SENW Sec. 23, T12N, R94W on State of Colorado land. A federal right-of-way is not required.

NO ACTION ALTERNATIVE: The "no action" alternative is that the wells would not be permitted and therefore no wells would be drilled. Yates Petroleum Corporation holds a valid and current oil and gas lease for the area where the proposed two Kaline Unit 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 the 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: Barb Blackstun 03/30/06

AREA OF CRITICAL ENVIRONMENTAL CONCERN

Affected Environment: Not present.

Environmental Consequences: Not applicable.

Mitigative Measures: Not applicable

Name of specialist and date: Jim McBrayer 03/07/06

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(s), Yates Kaline No. 8 and No.17 Well Pad, Access and Pipelines, have undergone a Class III cultural resource survey:

Darlington, David

2006 Class III Cultural Resource Inventory for the Yates Petroleum Corporation Kaline Unit No. 17 well pad, access road, and pipeline, Moffat County, Colorado. 06-WAS-106; BLM 12.25.06. Western Archaeological Services, Rock Springs, Wyoming.

Darlington, David

2006 Class III Cultural Resource Inventory for the Yates Petroleum Corporation Kaline Unit No. 8 well pad, access road, and pipeline, Moffat County, Colorado. 06-WAS-107; BLM 12.26.06. Western Archaeological Services, Rock Springs, Wyoming.

Darlington, David

2006 Class III Cultural Resource Inventory for the Yates Petroleum Corporation Kaline Unit No. 17 Additional Access Road, Moffat County, Colorado. 06-WAS-106a; BLM 12.32.06. Western Archaeological Services, Rock Springs, Wyoming.

The survey identified no eligible to the National Register of Historic Places prehistoric cultural resources. The proposed project may proceed as described in this EA with the following mitigative measures in place.

Mitigative Measures:

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: Henry S. Keesling 03/29/06

ENVIRONMENTAL JUSTICE

Affected Environment: There will be no impact to minority or low-income populations.

Environmental Consequences: None.

Mitigative Measures: None.

Name of specialist and date: Phillis A. Bowers 01/20/06

FLOOD PLAINS

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

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

Mitigative Measures: None

Name of specialist and date: Barb Blackstun 03/30/06

INVASIVE, NONNATIVE SPECIES

Affected Environment: Halogeton (*Halogeton glomeratus*) and cheatgrass (*Bromus tectorum*) are known to occur along roadsides, well pads, pipelines and other disturbed areas. Given an opportunity, both these species are capable of out competing native vegetation communities, and becoming the dominant cover type without management. Several biennial thistles are known to occur in this area given wet enough conditions. The potential for other noxious weeds to occur exists given favorable climatic and growing conditions.

Environmental Consequences: The surface disturbing activities and associated traffic involved with drilling two new wells and constructing the necessary access roads will

create a favorable environment, and provide a mode of transport for invasive species and other noxious weeds to become established. Invasive species can be spread through a variety of means including vehicular travel, wind, water, wildlife, and livestock movement. Required mitigation attached as Conditions of Approval to minimize disturbance, and the utilization of interim reclamation techniques would facilitate control of invasive species and reduce the potential of long-term infestation of annual and noxious weed species. All principles of Integrated Pest Management should be employed to control noxious weeds on public lands.

Mitigative Measures: None

Name of specialist and date: Curtis Bryan 03/30/06

MIGRATORY BIRDS

Affected Environment: The proposed action is located in a sagebrush/grass community and provides foraging and nesting habitat for a variety of migratory bird species. Two sagebrush obligate species listed on USFWS's Bird of Conservation Concern List, the sage sparrow and the Brewer's sparrow likely nest in the area. There are no raptor nests located in the vicinity of the proposed well sites.

Environmental Consequences: The proposed action has a low potential to result in the take of any migratory bird species. 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. As this would only impact eight acres of sagebrush habitat, the potential of take would remain low. If construction activities are conducted outside of the nesting season, there is very little chance of take of any migratory bird species.

Mitigative Measures: None

Name of specialist and date: Desa Ausmus 03/03/06

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: Henry S. Keesling 03/29/06

PRIME & UNIQUE FARMLANDS

Affected Environment: Not Present

Environmental Consequences: None

Mitigative Measures: None

Name of specialist and date: Barb Blackstun 03/30/06

T&E SPECIES – ANIMALS

Affected Environment: There are no threatened or endangered wildlife species or habitat for such species in or near the proposed well sites. The project area provides habitat for the greater sage grouse, a BLM sensitive species. The area is mapped as sage grouse winter habitat by the Colorado Division of Wildlife. The area does not provide nesting or brooding rearing habitat for sage grouse.

Environmental Consequences: 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 and loss of habitat. Other impacts, such as habitat fragmentation and the spread of exotic plants can also degrade sage grouse habitat (Connelly et al. 2004). Approximately eight acres of sage grouse habitat would be altered with the proposed action. Clearing vegetation would increase fragmentation within the sagebrush ecosystem and may degrade sage grouse habitat.

During the winter months, sage grouse are almost entirely dependent on sagebrush for food and cover. Sage grouse rely on areas where sagebrush protrudes above snow cover or on wind swept ridges and plateaus devoid of snow. Noise and increased human presence related to construction and drilling activity can disturb grouse using winter habitat. These impacts can be negligible to major, depending on such variables as the timing and duration of the activity and the severity of the winter. During mild winters, more winter habitat would be available to sage grouse and drilling during the winter months would not have major impacts to grouse. However, during severe winters, habitat is limited and displacement of grouse from important winter habitat could have consequences to over winter survival. The sagebrush stands in the vicinity of proposed well sites and roads exhibit characteristics that provide important habitat for sage grouse during winter months. Due to surface disturbance restrictions between December 1 and April 30 that protect wintering mule deer, greater sage grouse are unlikely to be disturbed during winter months.

References:

Bureau of Land Management. 1991. Colorado Oil and Gas Leasing and Development. Final Environmental Impact Statement. U.S. Dept. of Interior.

Connelly, J.W., S.T. Knick, M.A. Schroeder and S.J. Stiver. 2004. Conservation Assessment of Greater Sage-grouse and Sagebrush Habitats. Western Association of Fish and Wildlife Agencies. Unpublished Report. Cheyenne, Wyoming.

Mitigative Measures: None

Name of specialist and date: Desa Ausmus 03/03/06

T&E SPECIES – PLANTS

Affected Environment: There are no federally listed threatened or endangered plant species within or in the vicinity of the Proposed Action.

Environmental Consequences: None

Mitigative Measures: None

Name of specialist and date: Hunter Seim 03/02/06

T&E SPECIES - SENSITIVE PLANTS

Affected Environment: There are no BLM sensitive plant species within or in the vicinity of the Proposed Action.

Environmental Consequences: None

Mitigative Measures: None

Name of specialist and date: Hunter Seim 03/02/06

WASTES, HAZARDOUS OR SOLID

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

Environmental Consequences: Consequences will 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 will occur, but they can be remedied, and long-term impacts will be minimal.

Mitigative Measures: None

Name of specialist and date: Duane Johnson 03/03/06

WATER QUALITY/HYDROLOGY – GROUND

Affected Environment: Fresh water zones within the Wasatch Formation will be isolated from poorer quality water within the Fort Union Formation. Nearby surface waters will be protected by the surface casing and cement behind pipe. TOC is 2100' and the Fort Union

coals will be isolated by the production casing and cement behind pipe. Potable water is highly unlikely in this area. It is predicted that the produced water from the Fort Union coals will be of poor quality. Disposal of produced water is slated for the Kaline #5 disposal well.

Environmental Consequences: With the use of proper construction practices, drilling practices, and with best management practices no significant adverse impact to groundwater aquifers and quality is anticipated to result from the proposed action. A geologic and engineering review was performed on the 8-point drilling plan to ensure that the cementing and casing programs adequately protect the downhole resources.

Mitigative Measures: None

Name of specialist and date: Fred Conrath 03/31/06

WATER QUALITY/HYDROLOGY – SURFACE

Affected Environment: The well locations are staked on level terrain. The access road is staked on gently sloping terrain and the maximum grade is 8% for approximately 150 feet. Runoff water affected by this project would flow in an easterly and northerly direction to Scandinavian Gulch, a tributary of the Little Snake River. All stream segments within the affected environment are presently supporting their classified uses.

Environmental Consequences: The well locations would require new construction of one access road of approximately 3,218 feet. Construction of the new road, well pads, pipelines, and installation of drainage features should follow the recommendations provided in the Surface Operating Standards for Oil and Gas Development, 3rd Edition.

Increased sedimentation to Scandinavian Gulch and the Little Snake River during spring runoff or from high intensity summer/fall rainstorms would be the greatest potential impact to water quality. Localized increases in water turbidity and contamination due to fluid leaks or spills from equipment are potential impacts to waterways as a result of the project. 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 will reduce the potential impacts caused by surface runoff.

Mitigative Measures: None

Name of specialist and date: Barb Blackstun 03/31/06

WETLANDS/RIPARIAN ZONES

Affected Environment: No wetlands or riparian zones exist in the project area.

Environmental Consequences: None

Mitigative Measures: None

Name of specialist and date: Desa Ausmus 03/03/06

WILD & SCENIC RIVERS

Affected Environment: Not present.

Environmental Consequences: Not applicable.

Mitigative Measures: Not applicable

Name of specialist and date: Jim McBrayer 03/07/06

WILDERNESS, WSAs

Affected Environment: Not present.

Environmental Consequences: Not applicable.

Mitigative Measures: Not applicable

Name of specialist and date: Jim McBrayer 03/07/06

NON-CRITICAL ELEMENTS

FLUID MINERALS

Affected Environment: The proposed action is in favorability zone 4 (highest for oil and gas potential). These wells will penetrate the Wasatch, and Fort Union Formations. In these wells, Fort Union coal beds will be explored for possible coal bed natural gas recovery.

Environmental Consequences: The proposed casing and cementing programs appear to be adequate to protect and/or isolate all resources identified above.

Mitigative Measures: None

Name of specialist and date: Fred Conrath 03/31/06

PALEONTOLOGY

Affected Environment: The geologic formation at the surface is the Tertiary age Main Body of the Wasatch Formation (Twm, Tw), a soft light-gray, red, green, white, yellow and purple claystone, shale, sandstone, siltstone, and conglomeratic sandstone, of fluvial and lacustrine origin and intertongues with the Green River Formation. This formation has

been classified as a Class Ia formation for the potential occurrence of scientifically significant fossils.

Environmental Consequences: Scientifically significant fossils are found abundantly within this formation (Armstrong & Wolney, 1989). The potential for discovery of significant fossils on this location is considered to be high. If any such fossils are located here, construction activities could damage the fossils and the information that could have been gained from them would be lost. The significance of this impact would depend upon the significance of the fossil. The proposed action could also constitute a beneficial impact to paleontological resources by increasing the chances for discovery of scientifically significant fossils.

_____ The terrain is such that outcrops are exposed (eg. Badlands), therefore, a surface survey for paleontological resources will be required prior to surface disturbance.

_____ The majority of the terrain is covered with developed soils and vegetation. Therefore, a surface survey for paleontological resources will not be required.

 X The proposed action constitutes limited surface disturbance so as to make discovery of fossils by surface survey unlikely.

Mitigative Measures: Ceasing operations and notifying the Field Office Manager immediately upon discovery of a fossil during construction activities can effectively mitigate this impact. An assessment of the significance is made and a plan to retrieve the fossil or the information from the fossil is developed.

The majority of the terrain is covered with developed recent soils and vegetation. Therefore, a surface survey for paleontological resources will not be required.

Standard Discovery Stipulation

"If cultural or paleontological resources are discovered during exploration operations under this license, the licensee shall immediately notify the Field Office Manager and shall not disturb such discovered resources until the Field Office Manager issues specific instructions.

- a. Within 5 working days after notification, the Field Office Manager shall evaluate any cultural resources discovered and shall determine whether any action may be required to protect or to preserve such discoveries.
- b. The cost of data recovery for cultural resources discovered during exploration operations shall be borne by the licensee, if the licensee is ordered to take any protective measures. Ownership of cultural resources discovered shall be determined in accordance with applicable

law."

References

- Armstrong, Harley J. and Wolney, David G., 1989, Paleontological Resources of Northwest Colorado: A Regional Analysis, Museum of Western Colorado, Grand Junction, CO, prepared for Bur. Land Management, Vol. I of V.
- Miller, A.E., 1977, Geology of Moffat County, Colorado, Colo. Geol. Surv. Map Series 3, 1:126,720.

Name of specialist and date: Robert Ernst 02/28/06

RANGE MANAGEMENT/RANGE IMPROVEMENTS

Affected Environment: The proposed wells and associated road construction would take place in the Ricegrass Allotment #04318 and the Alkali Springs Allotment #04530. These allotments are permitted to Weibel Land LLC (0500115), and Mark & Roxine Foster (0500202). The Ricegrass Allotment is permitted for 260 AUM's of cattle use from May 1 to November 30. The Alkali Spring Allotment is permitted for 1810 AUM's of cattle use from May 1 to November 15. There is a boundary fence that separates these two allotments. The new road construction would breach the boundary fence to allow access to the site.

Environmental Consequences: The proposed wells and associated road construction would remove approximately 8 acres of total vegetation, and consequently AUM's as a direct impact. An increase in vehicle traffic and human activities in this area, as a result of road construction, well drilling and maintenance may displace livestock from the immediate area. As a result of this displacement livestock pressure may be higher in other areas of these allotments. If utilization monitoring and use pattern mapping indicate that livestock are exhibiting an unacceptable level of utilization in other parts of these allotments due to displacement, permitted AUM's on these allotments may need to be reduced.

The proposed road construction would require a cattle guard along the boundary fence with an adjacent gate for livestock trailing. Without the cattle guard, possible intermixing of cattle could accrue due to the same season of use. It is not anticipated that the proposed action will have a significant impact on livestock management.

Mitigation Measures: The proposed action would require a cattle guard and gate that meets the BLM standards.

Name of specialist and date: Amy Ruhs 03/02/06

SOILS

Affected Environment: The proposed two Kaline Unit wells would be located within the Tresano sandy loam and the Torriorthents-Torripsamments complex soil-mapping units. The Tresano sandy loam is found on plateaus, is very deep and well drained. It formed in eolian deposits derived from sandstone. Slopes within this unit average 3 to 12 percent. The Torriorthents-Torripsamments complex is found on hillslopes. These soils range from shallow to moderately deep and are well drained. It formed in residuum derived from sandstone and shale and eolian deposits derived from sandstone. Slopes within this unit average 20 to 40 percent. Runoff is medium to rapid and the hazard of wind and water erosion is moderate to high.

Environmental Consequences: The construction and operation of the two Kaline Unit wells 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 well pads, pipelines, and access roads. 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 eight 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 Surface Use Plan and Conditions of Approval in the approved APD. This mitigation will reduce the potential to have excessive sediments and salts in runoff water from the well site.

Mitigative Measures: Additional mitigative measures will 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 or well pads.

Name of specialist and date: Barb Blackstun 03/31/06

VEGETATION

Affected Environment: The proposed action is located in a sagebrush-grass community. Dominant plant species for this site include big sage (*Artemisia tridentata*), western wheatgrass (*Agropyron smithii*), black sage (*Artemisia nova*), Rubber rabbitbrush (*Chrysothamnus nauseosus*), needleandthread (*Stipa comata*), Indian ricegrass (*Stipa hymenoides*), junegrass (*Koeleria cristata*), squirreltail (*Elymus elymoides*) and sandberg bluegrass (*Poa secunda*).

Environmental Consequences: The proposed action would remove approximately 8 total acres of vegetation for well pad construction and new road access construction. The construction of the well pads would remove approximately 4 acres of previously

undisturbed vegetation and road construction would remove approximate 4 acres. The total disturbance caused by road construction and well pad construction is minimal, and would not jeopardize the greater herbaceous community, as long as appropriate weed management practices are employed.

Mitigative Measures: None

Name of specialist and date: Amy Ruhs 03/01/06

WILDLIFE, AQUATIC

Affected Environment: No aquatic wildlife or habitat for aquatic wildlife exists in the project area.

Environmental Consequences: None

Mitigative Measures: None

Name of specialist and date: Desa Ausmus 03/06/06

WILDLIFE, TERRESTRIAL

Affected Environment: The project area provides habitat for mule deer, elk and pronghorn antelope. Mule deer utilize this area during severe winters. The project area also provides habitat for small mammals, birds and reptiles.

Environmental Consequences: 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. These impacts are more significant during critical seasons, such as winter or reproduction. Big game species are often restricted to smaller areas during the winter months and may expend high amounts of energy to move through snow, locate food and maintain body temperature. Disturbances during the winter can displace big game, depleting much needed energy reserves and may lead to decreased over winter survival.

Mule deer using severe winter range are likely to be disturbed by noise and human activity associated with well pad construction and drilling. These activities should not be permitted from December 1 to April 30 to prevent significant impacts to mule deer.

Most small mammals 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: CO-09 Big game winter range. No surface disturbing activities between December 1 and April 30 in order to prevent disturbance of big game using critical winter range.

Name of specialist and date: Desa Ausmus 03/03/06

OTHER NON-CRITICAL ELEMENTS: For the following elements, those brought forward for analysis will be formatted as shown above.

Non-Critical Element	NA or Not Present	Applicable or Present, No Impact	Applicable & Present and Brought Forward for Analysis
Fluid Minerals			See Fluid Minerals
Forest Management	BB 03/03/06		
Hydrology/Ground		FC 03/31/06	
Hydrology/Surface		BB 03/31/06	
Paleontology			See Paleontology
Range Management			See Range Mgmt.
Realty Authorizations		PB 01/20/06	
Recreation/Travel Mgmt		RS 03/13/06	
Socio-Economics		PB 01/20/06	
Solid Minerals		RE 02/28/06	
Visual Resources		JM 03/07/06	
Wild Horse & Burro Mgmt	VMD 03/03/06		

CUMULATIVE IMPACTS SUMMARY: Cumulative impacts may result from the development of the two Kaline Unit 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 area. Currently several producing coalbed natural wells exist within a one-mile radius of the proposed well. Past or existing actions near the project area that would influence the landscape include wildfire, recreation, 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 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 project area provides habitat for a variety of wildlife species. The proposed action is not expected to significantly impact wildlife species or their habitat. The proposed action would not preclude this standard from being met.

Name of specialist and date: Desa Ausmus 03/03/06

SPECIAL STATUS, THREATENED AND ENDANGERED SPECIES (animal) STANDARD: The project area provides habitat for greater sage grouse, a BLM sensitive species. The project is not expected to significantly impact greater sage grouse or their habitat. The proposed action would not preclude this standard from being met.

Name of specialist and date: Desa Ausmus 03/03/06

PLANT AND ANIMAL COMMUNITY (plant) STANDARD: The plant communities impacted by the Proposed Action are currently meeting this standard. Plant diversity, vigor, abundance, and reproductive capability are currently at levels that ensure resilience in the plant community to human activities. Weeds, particularly halogeton, must be addressed and all principles of invasive weeds control should be employed. Given this mitigation measure, the Proposed Action would meet this standard. The No Action Alternative would also meet this standard because the disturbances would not occur.

Name of specialist and date: Amy Ruhs 03/01/06

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. This standard does not apply.

Name of specialist and date: Hunter Seim 03/02/06

RIPARIAN SYSTEMS STANDARD: The riparian standard for healthy public lands will not be affected by the proposed action.

Name of specialist and date: Desa Ausmus 03/06/06

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 pads will 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 areas 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: Barb Blackstun 03/31/06

UPLAND SOILS STANDARD: The proposed action will not meet the upland soil standard for land health, but it is not expected to while these well locations, pipelines, and access roads are used for operations. The well pad sites, pipeline corridors, and access road will 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 will reduce impacts to and conserve soil materials. Upland soil health will return to the well pads, pipeline corridors, and access road disturbances after well abandonment and reclamation practices have been successfully achieved.

Name of specialist and date: Barb Blackstun 03/31/06

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-100-2006-038

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 these two APDs 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's 13-point surface use plan, well location maps, and the Conditions of Approval are found in the well's case file labeled COC61496, Well #8 and COC61496, Well #15.

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 Legal Instruments Examiner will also be involved.

SIGNATURE OF PREPARER:

DATE SIGNED:

SIGNATURE OF ENVIRONMENTAL REVIEWER:

DATE SIGNED:

SIGNATURE OF AUTHORIZED OFFICIAL:

DATE SIGNED: