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-100-2006-003 EA

CASEFILE/PROJECT NUMBER/LEASE NUMBER:

COC67191: Lion Government Wells #13-36, #23-36, and #33-36
COC69330: Access Road ROW
COC69331: Pipeline ROW

PROJECT NAME: Three Lion Government Wells

LEGAL DESCRIPTION: All three wells in Moffat County, Colorado

Lion Government Well #13-36: Lot 7 Section 36, T12N, R101W, 6th PM
Lion Government Well #23-36: Lot 5 Section 36, T12N, R101W, 6th PM
Lion Government Well #33-36: Lot 3 Section 36, T12N, R101W, 6th PM

APPLICANT: Whiting Oil & Gas Corporation

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

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

Remarks: The proposed Three Lion Government Wells would be located within Management Unit 2 (Little Snake Resource Management Plan). One of the objectives of Management Unit 2 is to provide for the development of the oil and gas resource. The development of other resource uses/values within this unit is allowed consistent with the management objectives for oil, gas, and forest resources.

The proposed action 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 Notice of Staking is posted in the Little Snake Field Office for a minimum of 30 days before the Application for Permit to Drill is approved and issued to the applicant.

DESCRIPTION OF PROPOSED ACTION AND ALTERNATIVES: The proposed action is to approve three Applications for Permit to Drill (APDs) submitted by Whiting Oil & Gas Corporation. Whiting Oil & Gas Corporation proposes to drill three gas wells on BLM administered land located in the Hiawatha West Field in T12N, R101W. An APD has been filed with the LSFO for each of the three wells, the Lion Government Wells #13-36, #23-36, and #33-36. 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 Whiting Oil & Gas Corporation 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 60 miles southeast of Rock Springs, Wyoming. Construction work would start during the winter of 2005-2006 and the estimated duration of construction and drilling is 45 days for each well. A short access road connecting all three wells would be constructed; approximately 3470 feet of new road construction would be necessary. The new access road does follow a reclaimed roadbed for approximately 1000 feet. The reclaimed roadbed led to the now plugged and abandoned Sugarloaf Well #36-3. Total surface disturbance for new road construction would be approximately four (4.0) acres. Whiting O&G submitted a right-of-way application for the 498' off lease section of access road.

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 (2.0) acres would be disturbed for construction of each well pad. This would include the 235' by 335' well pads, the topsoil, and subsoil piles. An unlined reserve pit would be constructed on each well pad to hold drill mud and cuttings. If a 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.

Whiting O&G did include plans for gas sales pipeline with the APDs. Approximately 3907 feet of new pipeline would be installed and connected to the existing compressor facility in the Hiawatha West Field to service the wells once production is established. New pipeline installation would be buried and occur within and adjacent to the new access road construction for approximately one-half the distance to the compressor. Approximately one-half the distance of the corridor to the compressor would occur in undisturbed ground. Whiting O&G submitted a right-of-way application for the 1120' off lease section of gas sales pipeline.

NO ACTION ALTERNATIVE: The "no action" alternative is that the wells would not be permitted and therefore no wells would be drilled. Whiting Oil & Gas Corporation holds a valid

and current oil and gas lease for the area where the proposed three Lion Government Wells would be located. Once an oil and gas lease is issued, the lessee/operator has been granted the right to drill on that oil and gas lease, subject to the conditions of the lease. Since the proposed action is consistent with the ROD and the Oil and Gas Leasing EIS, rejecting the APDs for the wells is not a reasonable alternative.

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 11/18/05

AREA OF CRITICAL ENVIRONMENTAL CONCERN

Affected Environment: Not present.

Environmental Consequences: Not applicable.

Mitigative Measures: Not applicable

Name of specialist and date: Jim McBrayer 11/18/05

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, and An Isolated Empire, A History of Northwestern Colorado, Bureau of Land Management Colorado, Cultural Resource Series, Number 2.

Environmental Consequences: The proposed project, Whiting Petroleum's Lion Government well, access and pipelines for the 13-36, 23-36 and 33-36, have undergone a Class III cultural resource surveys:

Hatcher, Julie
2005 Whiting Petroleum Corporation, Lion Government #13-36 Well Location, Access, and Pipeline, in Moffat County, Colorado. BLM 21.1.06. Pronghorn Archaeology, Inc., Mills, Wyoming.

Hatcher, Julie
2005 Whiting Petroleum Corporation, Lion Government #23-36 Well Location, Access, and Pipeline, in Moffat County, Colorado. BLM 21.2.06. Pronghorn Archaeology, Inc., Mills, Wyoming.

Hatcher, Julie
2005 Whiting Petroleum Corporation, Lion Government #33-36 Well Location, Access, and Pipeline, in Moffat County, Colorado. BLM 21.3.06. Pronghorn Archaeology, Inc., Mills, Wyoming.

The survey identified one cultural resource, 5MF6146, a not 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 10/31/05

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 11/07/05

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 11/18/05

INVASIVE, NONNATIVE SPECIES

Affected Environment: Halogeton (Halogeton glomeratus) and cheatgrass (Bromus tectorum) are known to occur along roadsides, well pads 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 three new wells and upgrading and constructing 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, and 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: All equipment used for ground disturbing activities must be power washed prior to entering the project area to minimize introduction of invasive seed.

Name of specialist and date: Curtis Bryan 11/08/05

MIGRATORY BIRDS

Affected Environment: Sagebrush stands in the project area provide foraging and nesting habitat for a variety of migratory birds. 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. Additional birds that may nest in the area include the vesper sparrow and sage thrasher. There are no raptor nests located in the vicinity of the three well sites.

Environmental Consequences: The proposed action has a low potential to result in the take of any migratory bird species. Nesting of migratory birds may be disrupted and nests could be lost if construction activities are conducted during the nesting period (May – July). As this would only impact 10 acres of sagebrush habitat, the potential of take would remain low. The proposed well pad, roads and pipelines would disturb 10 acres of nesting habitat for migratory birds. This disturbance should not significantly impact migratory birds, however, increased fragmentation of habitat from oil and gas development may decrease the suitability of the habitat for some species. Ingelfinger (2001) found that roads associated with oil and gas development have a negative impact on passerines bird species. Bird densities were reduced within 100m of each road. Due to the amount of new road construction and an increase in traffic on these roads, passerine populations in the area are likely decreasing.

References:

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

Mitigative Measures: None

Name of specialist and date: Desa Ausmus 11/18/05

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 10/31/05

PRIME & UNIQUE FARMLANDS

Affected Environment: Not Present

Environmental Consequences: None

Mitigative Measures: None

Name of specialist and date: Barb Blackstun 11/18/05

T&E SPECIES – ANIMALS

Affected Environment: The project area does not provide habitat for any federally listed threatened or endangered wildlife species. The project area provides habitat for greater sage grouse, a BLM sensitive species. The proposed well sites, roads and pipelines fall within CDOW mapped nesting and winter habitat for sage grouse. There are two leks located within a two-mile radius of the proposed action area.

Environmental Consequences: No Federally ESA listed animal species would be affected by the proposed action.

Sagebrush stands in the project area do not meet the characteristics of quality winter habitat for sage grouse. Sage grouse may occasionally utilize this area during the winter months, however, it is unlikely that the project site is critical for sage grouse during the most severe winters. The proposed well sites do provide quality nesting habitat for sage grouse. If drilling activities were to take place during the breeding or nesting season (March 1 to June 30), significant impacts to sage grouse using this habitat would be expected. Impacts to grouse species from oil and gas development are discussed in the Colorado Oil and Gas EIS (1991). Impacts include, but are not limited to, displacement into less suitable habitat, nest abandonment, destruction of nests and loss of habitat. Other impacts, such as habitat fragmentation and the spread of exotic plants can also degrade sage grouse habitat (Connelly et al. 2004). Noise and increased human activity related to drilling can disrupt breeding and nesting (Connelly et al. 2004). Holloran and Anderson (2004) found a higher annual decline in male lek attendance at leks within 3.2km from drilling activity. To

prevent significant impacts to sage grouse species, construction and drilling activities associated with the proposed access roads, pipelines and well pads should not be permitted from March 1 to June 30. This timing limitation would prevent accidental nest destruction, nest and lek abandonment and displacement into less suitable habitat. Individual well pad construction would not have significant negative impacts on sage grouse habitat, however, the cumulative impacts of three new wells, their associated roads and the amount of gas development already existing in the area, will continue to degrade grouse habitat. Oil and gas development may lead to decreased sage grouse use of this area.

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.

Holloran, M.J., and S.H. Anderson. 2004. Sage-grouse response to natural gas filed development in northwestern Wyoming. Page 16 in Proceedings of the 24th Meeting of the Western Agencies Sage and Columbian Sharp-tailed Grouse Technical Committee. Wenatchee, Washington (Abstract).

Mitigative Measures: CO-30 Sage grouse nesting habitat. Sage grouse leks will be avoided by 2 miles between March 1 and June 30 to protect nesting sage grouse.

Name of specialist and date: Desa Ausmus 11/18/05

T&E SPECIES – PLANTS

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

Environmental Consequences: None

Mitigative Measures: None

Name of specialist and date: Hunter Seim 11/02/05

T&E SPECIES - SENSITIVE PLANTS

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

Environmental Consequences: None

Mitigative Measures: None

Name of specialist and date: Hunter Seim 11/02/05

WASTES, HAZARDOUS OR SOLID

Affected Environment: If a release does occur, the environment affected would be dependent on the nature and volume of material released. If there are no releases, there 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 11/01/05

WATER QUALITY – GROUND

Affected Environment: Water within the Wasatch Formation in existing wells within T.12N., R.100W., sections 22 and 23 ranges from 1,402 ppm TDS to 30,599 ppm TDS. Potable water is highly unlikely in this area. The surface casing will be adequate to protect any fresh water zones with production casing and cement behind pipe from TD to the surface.

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 11/22/05

WATER QUALITY – SURFACE

Affected Environment: No springs would be affected by the well project. Runoff water from the well locations would ultimately reach Vermillion Creek. The Three Lion Government Wells would be located on a plateau where runoff water would flow through ephemeral drainages towards Canyon Creek or Vermillion Creek. Vermillion Creek within the affected environment must have water quality sufficient to support Aquatic Life Warm 2, Recreation 1b (June 1 through August 31), Recreation 2 (September 1 through May 31) and Agriculture.

Environmental Consequences: The well locations would require construction of a short access road that would connect all three wells. This access road makes use of a reclaimed roadbed to the plugged and abandoned Sugarloaf Well #36-3. Construction of the access road, well pads, pipelines, and installation of the specific drainage features should follow the recommendations provided in the Surface Operating Standards for Oil and Gas Development, 3rd Edition.

Increased sedimentation to Canyon Creek and Vermillion Creek 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 will reduce the potential impacts caused by surface runoff.

Mitigative Measures: None

Name of specialist and date: Barb Blackstun 11/18/05

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 11/18/05

WILD & SCENIC RIVERS

Affected Environment: Not present.

Environmental Consequences: Not applicable.

Mitigative Measures: Not applicable

Name of specialist and date: Jim McBrayer 11/18/05

WILDERNESS, WSAs

Affected Environment: Not present.

Environmental Consequences: Not applicable.

Mitigative Measures: Not applicable

Name of specialist and date: Jim McBrayer 11/18/05

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, Fort Union, Lance, Fox Hills, and Lewis Shale Formations. In these wells conventional sands will be explored for possible economic oil and gas recovery in most of the above mentioned formations. Bituminous coal seams with more than three thousand feet of overburden can be found throughout the Ft. Union Formation. Shallower thin beds of bituminous coal can be found in the Wasatch Formation as well. There mineable value is low and their total gas content is low, 0-100 cubic feet of gas per ton of coal. 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 overall.

Environmental Consequences: The proposed casing and cementing programs appear to be adequate to protect and/or isolate all resources identified above with casing and cement behind pipe from TD to the surface.

Mitigative Measures: None

Name of specialist and date: Fred Conrath 11/22/05

PALEONTOLOGY

Affected Environment: The geologic formation at the surface is the Tertiary Age formation, Green River Formation, Luman Tongue unit (Tglu). This formation is a moderately resistant, light- to medium brown fissile oil shale, siltstone, sandstone, limestone, carbonaceous shale, coal, and conglomerate. Tglu is mapped in the Vermillion Creek area. Thickness is 100-150 meters. This formation has been classified a Class II formation for the potential for occurrence of scientifically significant fossils. Scientifically significant fossils are occasionally found within this formation (Armstrong & Wolney, 1989). The potential for discovery of significant fossils on this location is considered to be moderate.

Environmental Consequences: 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. This impact can be effectively mitigated by ceasing operations and notifying the Field Office Manager immediately upon discovery of a fossil during construction activities. An assessment of the significance is made and a plan to retrieve the fossil or the information from the fossil is developed.

The proposed action could also constitute a beneficial impact to paleontological resources by increasing the chances for discovery of scientifically significant fossils.

Mitigative Measures: "Standard Discovery Stip", i.e., “If fossils are discovered during construction or other operations, all activity in the area will cease and the Field Office Manager will be notified immediately. An assessment of significance will be made within an agreed time frame. Operations will resume only upon written notification by the Authorized Officer."

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 12/02/05

REALTY AUTHORIZATIONS

Affected Environment: There is one gas pipeline (COC40600) issued to Northern Pump CO in the project area. There is one existing access road R/W (COC44160) held by Xeric Oil & Gas Corp present in the project area. This project will have no impact on the existing authorizations.

Whiting Oil & Gas Corp. will be using existing MCR10N and MCR63. They have submitted a right-of-way application for the 498’ off lease section of access road.

Whiting Oil & Gas Corp. has submitted a right-of-way application for the 1120’ off lease section of gas sales pipeline.

Environmental Consequences: An additional 1120 feet in length and 30 feet in width of pipeline (0.77 acre disturbance) is necessary for the off lease section of pipeline. The off lease access road ROW will be 498 feet in length and 25 feet in width of new road construction (0.29 acre disturbance). After the wells are plugged, the pipeline and access road will be reclaimed according to the terms and conditions of the APD and R/W grants.

Mitigative Measures: None.

Name of specialist and date: Louise McMinn 12/02/05

SOILS

Affected Environment: The Three Lion Government well pads are staked on very level ground. The proposed wells are found within the Leswill-Rogrube complex and Diaflats-Fondillas complex soil-mapping units. Slopes within these units average 1 to 15 percent. The soils are derived from sandstone, shale, and siltstone. Generally, these soils are very shallow and well drained. Runoff class ranges from medium to high.

Environmental Consequences: 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 and creeks are impacts most likely to occur. Soil erosion would be reduced by mitigation described in the Surface Use Plan and Conditions of Approval in the approved APD. 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, surface drainages affected by the road or well pad, and well pad embankments.

Mitigative Measures: None

Name of specialist and date: Barb Blackstun 11/22/05

VEGETATION

Affected Environment: All three of these wells are located in an ecotonal salt desert/sagebrush-grass plant community. Dominant species include Wyoming big sagebrush (Artemesia tridentata wyomingensis), shadscale saltbush (Atriplex confertifolia), Nuttall's saltbush (A. nuttallii), winterfat (Ceratoides lanata), prickly pear (Opuntia spp.), spiny hopsage (Grayia spinosa), rubber rabbitbrush (Chrysothamnus nauseous), greasewood (Sarcobatus vermiculatus), Indian ricegrass (Oryzopsis hymenoides), western wheatgrass (Agropyron smithii), and Sandberg bluegrass (Poa sandbergii).

Environmental Consequences: The proposed action would completely remove approximately 10 acres native vegetation for the access road and three well pads. The full extent of this disturbance would be temporary and the long-term nature of it would depend on whether or not the wells are productive. If the wells produce, required reclamation would aid in restoring portions of the disturbance. If the wells do not produce, reclamation would be required for each site. Overall, the disturbance of vegetation would be small within the larger landscape; however, this site is extremely susceptible to invasion by halogeton (Halogeton glomeratus) both within disturbed areas as well as within the surrounding native plant community. Required reclamation procedures would need to be strictly adhered to as well as the integrated weed abatement requirements in order to assure proper reestablishment of native plants and suppression of halogeton. Impacts would be acceptable as long as all COAs are closely and faithfully followed.

Mitigative Measures: None

Name of specialist and date: Hunter Seim 11/02/05

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 11/18/05

WILDLIFE, TERRESTRIAL

Affected Environment: The project area provides habitat for mule deer and pronghorn antelope year round. 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. The proposed action is located in marginal habitat for most species, and therefore, it is unlikely the project would have significant impacts to wildlife species. All wildlife species using the area are likely to be displaced during construction and drilling activities and may find the project area less suitable once construction is complete, due to the amount of development in the area.

Most small mammals 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.

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

Mitigative Measures: None

Name of Specialist and Date: Desa Ausmus 11/18/05

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		MME 11/15/05	
Hydrology/Ground		FC 11/22/05	
Hydrology/Surface		BB 11/18/05	
Paleontology			See Paleontology
Range Management		JHS 11/02/05	
Realty Authorizations			See Realty
Recreation/Travel Mgmt		RS 11/14/05	
Socio-Economics		PB 11/07/05	
Solid Minerals	RE 12/02/05		
Visual Resources		JM 11/18/05	
Wild Horse & Burro Mgmt	VMD 11/08/05		

CUMULATIVE IMPACTS SUMMARY: Cumulative impacts may result from the development of the three Lion Government 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 Hiawatha West Field. Currently numerous producing wells exist within a one-mile radius of the proposed wells. Other past or existing actions near the project area that have influence on the landscape are wildfire, recreation, hunting, grazing, and ranching activities.

Surface disturbance associated with oil and gas activity would increase the potential for erosion and sedimentation. 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.

Over the last 20 years there has been a slow but steady increase in oil and gas production facilities within and adjacent to Vermillion Creek. Cultural resource surveys in the area have identified several prehistoric cultural resources. These resources were at one time further away from the industry activity. Now they are in close proximity to these facilities. As the Hiawatha West Field is in-filled, with more pipeline, compressors, access roads, and pads being constructed, a real potential for impacts to known and yet to be recorded cultural resources is present.

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

Cumulative impacts to the livestock grazing operations in the area are also increased through the Proposed Action. The grazing allotment in which these wells are proposed is primarily a winter sheep allotment. The growth in wells, roads, and human activity has reduced the availability of forage in this area far beyond direct impacts caused by construction. Constant truck traffic and decreases in the size of undisturbed areas have resulted in the Canyon Creek/G Wash area becoming largely unavailable for sheep use. Halogeton which has increased among the new roads and well pads is toxic to sheep. The resulting impact to grazing activities permitted in the area is a loss of available Animal Unit Months (AUMs), i.e. a loss of the amount of livestock that the allotment can reasonably carry. Due to recent years of drought, the livestock operator has only lightly used this allotment, so direct impacts to grazing activities have not been fully felt. However, as precipitation patterns improve, there will be a likely significant decrease in the amount of livestock that can be permitted on the allotment. Utilization and production monitoring of unaffected areas remaining in the allotment would be necessary to determine a proper stocking rate after accounting for the loss of available forage from gas development (both direct and indirect) if improving precipitation patterns result in better forage conditions throughout the allotment.

Canyon Creek and the surrounding areas have experienced an increase in oil and gas development in recent years. Over 35 miles of roads connect numerous wells in the Colorado portion of T12N, R101W. Little development exists west of Canyon Creek; however, there are 61 producing and 28 abandoned but unreclaimed wells east of the project area in T12N, R100W. Pad construction and the associated infrastructure of roads lead to fragmentation of habitat for wildlife species. As this area is developed, it can be expected that wildlife use of the area would decrease due to habitat fragmentation and decrease in security.

Many historic raptor nests associated with Canyon Creek have not been active for the past several years. Oil and gas development may have made this area less suitable for these species by increasing disturbance, decreasing nest security and removing habitat for prey species. It is probable that raptors have moved away from developing areas to nest. As oil and gas development moves along the creek, it may disturb any new nests. Eventually, some raptors may be able to habituate to the increased disturbances. Habitat fragmentation from well pad construction and the associated roads have likely decreased the nesting suitability for other migratory birds. Ingelfinger (2001) found that roads associated with oil and gas development

have a negative impact on passerines bird species. Bird densities were reduced within 100m of each road. Due to the amount of new road construction and an increase in traffic on these roads, passerine populations in the area are likely decreasing.

The cumulative impacts of three new wells, their associated roads and the amount of gas development already existing in the area, will continue to degrade habitat for the greater sage grouse. The project area does provide nesting and brood rearing habitat for sage grouse. Fragmentation, mostly due to road construction, is an important factor contributing to a decrease in habitat quality. Oil and gas development combined with sagebrush die-offs may lead to decreased sage grouse use of the habitat.

Although big game species are able to adapt to disturbances better than other wildlife, increased development may still have some impacts to mule deer, antelope, and elk. Timing stipulations adequately protect big game species during critical times of the year. An increase in vehicle traffic will occur as the Hiawatha West Field is developed. A significant impact to big game may be vehicle-animal collisions, as these are a major cause of mortality for big game species.

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.
References:

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

STANDARDS:

PLANT AND ANIMAL COMMUNITY (animal) STANDARD: The project area provides habitat for a variety of wildlife species. The proposed action would increase fragmentation of sagebrush stands, degrading wildlife habitat. The proposed action would not meet this standard within a one mile radius of the proposed action due to the amount of oil and gas development in the area. However, the proposed action would not preclude this standard from being met on a landscape level.

Name of specialist and date: Desa Ausmus 11/18/05

SPECIAL STATUS, THREATENED AND ENDANGERED SPECIES (animal) STANDARD: The project area provides habitat for greater sage grouse, a BLM sensitive species. The proposed action would increase fragmentation of sagebrush stands, degrading sage grouse habitat. The proposed action would not meet this standard within a one mile radius of the proposed action due to the amount of oil and gas development in the area. However, the proposed action would not preclude this standard from being met on a landscape level.

Name of specialist and date: Desa Ausmus 11/18/05

PLANT AND ANIMAL COMMUNITY (plant) STANDARD: These sites are currently meeting this standard. Species diversity, abundance, and vigor are all at levels expected for the sites. The Proposed Action would meet this standard as long as required reclamation and weed abatement practices are strictly adhered to. Under these conditions, the Proposed Action would meet this standard.

Name of specialist and date: Hunter Seim 11/02/05

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

Name of specialist and date: Hunter Seim 11/02/05

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 11/18/05

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 site. When the well pads are no longer needed for production operations, the disturbed area 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 11/18/05

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 11/18/05

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-100-2006-003

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 three 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. Right-of -Way Grants COC69330 and COC69331 will be issued to Whiting Oil and Gas Corporation (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's 13-point surface use plan, well location maps, and the Conditions of Approval are found in the well's case file labeled COC67191, Well #13-36, Well #23-36, and Well #33-36. ROW stipulations and maps for Grants COC69330 and COC69331 issued to Whiting Oil and Gas Corporation 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 Legal Instruments Examiner will also be involved.

SIGNATURE OF PREPARER:

DATE SIGNED:

SIGNATURE OF ENVIRONMENTAL REVIEWER:

DATE SIGNED:

SIGNATURE OF AUTHORIZED OFFICIAL:

DATE SIGNED:

ATTACHMENT 1

RECOMMENDATION AND RATIONALE
COC69330, Lion Govt #13-36, 23-36, 33-36 Pipeline
COC69331, Lion Govt #13-36, 23-36, 33-36 Access Road

RECOMMENDATION

I recommend the right-of-way (R/W) grant COC69330 be issued Whiting Oil & Gas Corp. pursuant to Title V of the Federal Land Policy and Management Act of October 21, 1976 (90 Stat. 2776; 43 U.S.C. 1761). The R/W grant authorizes construction, operation, maintenance and termination of an access road across public lands located in Lot 1, section 35, T.12N., R.101W., 6th PM, Moffat County, Colorado.

The right-of-way portion of the access road for the Lion Govt #13, 23, and 33 wells is 498' and 50' wide during construction, consisting of 0.57 acre. Upon completion of construction and interim reclamation, the permanent R/W width will be 25'. The access road is subject to the 43 CFR 2800 regulations, grant terms and conditions and stipulations and APD Conditions of Approval and is subject to rental according to 43 CFR 2803.1-2.

I recommend right-of-way (R/W) grant COC69331 be issued to Whiting Oil & Gas Corp. pursuant to Section 28 of the Mineral Leasing Act of 1920, as amended (30 U.S.C. 185). The R/W grant authorizes construction, operation, maintenance and termination of a buried gas pipeline across public lands located in sec. 36, NW¼, T.12N., R.101W., 6th PM, Moffat County, Colorado.

The R/W portion of the pipeline is 1120' long and 30' wide consisting of 0.77 acre. The pipeline R/W is issued for 25 years with the right to renew, is subject to the terms and conditions and stipulations of the grant, and is subject to rental. The R/Ws are appealable to the Interior Board of Land Appeals, Office of the Secretary, in accordance with the regulations contained in 43 CFR, Part 4 and Form 1842-1. The road and pipeline are depicted on map labeled Attachment 2.

RATIONALE

It is the policy of the Bureau of Land Management to grant R/W's to occupy and use public land where such is consistent with resource values, the Bureau's planning system, and local government concerns. To this effect, no conflicts were found; the action does not result in any undue or unnecessary environmental degradation. The proposed new Lion Govt. wells would be located within Management Unit 2 (Little Snake Resource Management Plan). One of the objectives of Management Unit 2 is to provide for the development of the oil and gas resource. The development of other resource uses/values within this unit is allowed consistent with the management objectives for oil, gas, and forest resources. The proposed use, as planned and mitigated, is a suitable use of the land, which will not conflict with the present or know future use

of the area. The access road is consistent with Title V of FLPMA and the pipeline is consistent with Section 28 of the Mineral Leasing Act of 1920, as amended (30 U.S.C. 185) and the regulations authorizing use of public land under Title 43 CFR 2800.