

**U.S. Department of the Interior  
Bureau of Land Management  
Glenwood Springs Energy Office  
2425 South Grand Ave., Suite 101  
Glenwood Springs, CO 81601**

**ENVIRONMENTAL ASSESSMENT**

**NUMBER:** CO-140-2006-087 EA.

**CASEFILE NUMBER:** Lease # COC 44963.

**PROJECT NAME:** Application for Permit to Drill:

**LEGAL DESCRIPTION:**

Red Point Well (RPW 31-26-596):

Surface Location: 417' FNL x 1458' FEL, NWNE Sec. 26, T5S, R96W  
Bottom-hole: 455' FNL x 2077' FEL, NWNE Sec. 26, T5S, R96W

Red Point Well (RPW 41-26-596):

Surface Location: 476' FNL x 1412' FEL, NWNE Sec. 26, T5S, R96W  
Bottom-hole: 999' FNL x 553' FEL, NENE Sec. 26, T5S, R96W

Red Point Well (RPW 331-26-596):

Surface Location: 441' FNL x 1440' FEL, NWNE Sec. 26, T5S, R96W  
Bottom-hole: 1215' FNL x 2115' FEL, NWNE Sec. 26, T5S, R96W

Red Point Well (RPW 431-26-596):

Surface Location: 464' FNL x 1421' FEL, NWNE Sec. 26, T5S, R96W  
Bottom-hole: 780' FNL x 1687' FEL, NWNE Sec. 26, T5S, R96W

Red Point Well (RPW 441-26-596):

Surface Location: 453' FNL x 1431' FEL, NWNE Sec. 26, T5S, R96W  
Bottom-hole: 704' FNL x 181' FEL, NENE Sec. 26, T5S, R96W

Red Point Well (RPW 541-26-596):

Surface Location: 429' FNL x 1449' FEL, NWNE Sec. 26, T5S, R96W  
Bottom-hole: 245' FNL x 977' FEL, NENE Sec. 26, T5S, R96W

**APPLICANT:** Williams Production RMT Company

**DESCRIPTION OF PROPOSED ACTION AND ALTERNATIVES**

**Proposed Action:**

Williams Production RMT proposes to drill six directional wells from one location into the above described federal lease. The surface is owned by Encana. Average surface disturbance is about 3 acres.

This proposal will require approximately 200' of new road to access the pad. All pipelines will be placed in the existing roadways. Vegetation is predominantly basin big sagebrush, rubber rabbitbrush and cheatgrass with shallow rocky soils and oil shale scattered on the surface.

**No Action Alternative:** The proposed action involves federal subsurface minerals that are encumbered with federal oil and gas leases, which grants the lessee a right to explore and develop the lease. The no action constitutes denial of the proposed action and could be used to prevent unnecessary and undue degradation. Absent a non-discretionary statutory prohibition against drilling, BLM cannot deny the right to drill and develop the leasehold. Only Congress can completely prohibit development activities (Western Colorado Congress, 130 IBLA 244, 248 (1994), citing Union Oil Co. of California v. Morton, 512 F.2d 743, 750-51 (9<sup>th</sup> Cir. 1975). For this reason, the No Action alternative has been considered but eliminated.

**NEED FOR THE ACTION:** The purpose and need is to authorize the Application for Permit to Drill (APD) to satisfy federal lease obligations that will in turn provide natural gas for commercial marketing to the public.

**PLAN CONFORMANCE REVIEW:** The Proposed Action is subject to and has been reviewed for conformance with the following plan (43 CFR 1610.5, BLM 1617.3):

Name of Plan: Glenwood Springs Resource Management Plan.

Date Approved: Amended in November 1991 - Oil and Gas Leasing and Development – Final Supplemental Environmental Impact Statement; amended Nov. 1996 - Colorado Standards and Guidelines; amended in August 1997 - Castle Peak Travel Management Plan; amended in March 1999 - Oil and Gas Leasing & Development Final Supplemental Environmental Impact Statement; amended in November 1999 - Red Hill Plan Amendment; and amended in September 2002 – Fire Management Plan for Wildland Fire Management and Prescriptive Vegetation Treatment Guidance.

Decision Number/Page: The proposed action is located on leases in area designated Open for oil and gas leasing in 1984 in the Glenwood Springs Resource Management Plan (page 14 and map 4).

Decision Language: The FSEIS described the environmental effects, including the cumulative effects, of oil and gas development, but did not authorize the construction of any individual well locations. This EA is more site-specific than the FSEIS and includes the results of the on-the-ground inventories for cultural resources and special status plant and animal species, if appropriate. This EA tiers to both the DSEIS and FSEIS and the information in the FSEIS is incorporated by reference. The EA will focus on specific issues and will not deal with the larger regional issues addressed in the FSEIS. The proposed action has been reviewed for and is in compliance with the FSEIS (43 CFR 1610.5, BLM 1617.3) - Page or Decision Number: Pages 1-5, Record of Decision dated March 24, 1999.

**Standards for Public Land Health:** In January 1997, Colorado Bureau of Land Management (BLM) approved the Standards for Public Land Health. The five standards cover upland soils, riparian systems, plant and animal communities, threatened and endangered species, and water quality. Standards describe conditions needed to sustain public land health and relate to all uses of the public lands. The Rifle West Land Health Assessment, which encompasses the area of the proposed action, was completed in 2004, and the Determination Document was signed on August 31, 2005. Results indicate that this portion of the landscape is meeting the land health standards but with problems related to cheatgrass dominating much of the understory vegetation. Based on the findings of the assessment, the authorized officer may take appropriate action to achieve conformance with the standards or implement further mitigating measures on future actions to maintain or prevent a further decline in land health.

Because a standard exists for these five categories, the impact analysis must address whether the proposed action or any alternatives being analyzed would result in impacts that would maintain, improve, or deteriorate land health conditions for that specific parameter. These analyses are located in specific elements listed below:

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

### **CRITICAL ELEMENTS**

#### **AIR QUALITY**

Affected Environment: The proposed action area (Garfield County) has been described as an attainment area under CAAQS and NAAQS (Colorado Ambient Air Quality Standards and National Ambient Air Quality Standards). An attainment area is an area where ambient air pollution amounts are determined to be below NAAQS standards. For further details, refer to the Draft Roan Plateau RMPA EIS, page 3\_20-22.

Environmental Consequences: The Draft Roan Plateau EIS, pages 4\_31-4\_48, describes potential effects from oil and gas development. Analysis was completed with regard to greenhouse gas emissions, a near-field and far-field analysis for carbon monoxide, particulate matter (PM<sub>10</sub> and PM<sub>2.5</sub>), sulfur dioxide, hazardous air pollutants including: benzene, ethylbenzene, formaldehyde, hydrogen sulfide, toluene, and xylenes. Sulfur and nitrogen deposition analysis, acid neutralizing capacity, and visibility screening-level analysis were also completed in the Draft EIS. Findings indicate that no adverse long term effects would be realized under the Draft Roan Plateau EIS plan. It is anticipated that the proposed action in this document would not likely produce adverse effects to air quality when compared to the Roan Plateau plan.

However, it is anticipated that road and pad construction activities along with production activities associated with the proposed action would likely produce high levels of dust in dry conditions without dust abatement. Truck traffic along the existing gravel road would contribute additional dust in dry conditions.

Mitigation: Activities described in the proposed action would result in localized short-term increases in vehicle and equipment emissions. The effects would be well below applicable ambient air quality standards. As mentioned above, increases in dust levels is anticipated with the proposed activities and truck traffic along the existing gravel road. To mitigate dust generated by these activities, the operator will be required to implement dust abatement strategies as needed by watering the road and construction areas and/or by applying a surfactant approved by the authorized officer.

#### **AREAS OF CRITICAL ENVIRONMENTAL CONCERN, WILD AND SCENIC RIVERS and WILDERNESS**

Affected Environment: There are no federal un-studied rivers, rivers found to be eligible or designated Wild and Scenic Rivers or designated Wilderness areas, Wilderness Study Areas or citizens proposed wilderness areas within the proposed project area.

#### **CULTURAL RESOURCES**

Affected Environment: Three Class III inventories (GSFO #1106-4, 14505-2, and 1104-1) were conducted of the area containing the well pad location and access road. No historic properties were identified as eligible for listing on the National Register of Historic Places. As such a determination of “**No Historic Properties Affected**” was made in accordance with the BLM/SHPO National

Programmatic Agreement (1997), the Colorado Protocol (1998) and National Historic Preservation Act (16 U.S.C. 470f).

Environmental Consequences/Mitigation: Indirect long term cumulative impacts from increased access and personnel could result in a range of impacts to known and undiscovered cultural resources in the vicinity of the location, from illegal collection and excavation to vandalism.

The importance of the Education/Discovery Stipulation needs to be stressed to Williams and their subcontractors informing them of their responsibilities to protect and report any cultural resources encountered on public land during operations under this permit.

Mitigation: A standard Education/Discovery Condition of Approval for Cultural Resource protection will be attached to the APDs.

**ENVIRONMENTAL JUSTICE**

Affected Environment: Review of 2001 data from US Census Bureau indicates the median annual income of Garfield County averages \$43,560 and is neither an impoverished or wealthy county. Median annual income of Eagle County averages \$51,578 and is not impoverished but is considered a wealthy county. U.S. Census Bureau data from July, 2002 shows the minority population of Garfield and Eagle County comprises less than 3 % of the total population<sup>1</sup>.

Garfield County		Eagle County	
Median Household Income		Median Household Income	
Estimate	90% Confidence Interval	Estimate	90% Confidence Interval
\$43,560	\$40,491 to \$46,613	\$51,578	\$47,958 to \$55,177

Environmental Consequences/Mitigation: The proposed action and alternatives are not expected to create a disproportionately high and adverse human health impact or environmental effect on minority or low-income populations within the area.

**FARMLANDS, PRIME AND UNIQUE**

Affected Environment: The proposed action does not involve any prime or unique farmlands.

**FLOODPLAINS, WETLANDS, RIPARIAN ZONES** (includes a analysis on Standard 2)

Affected Environment: The proposed action does not involve any floodplains, wetlands or riparian zones. Wetlands and riparian vegetation do not reside within the limits of the proposed action.

Environmental Consequences/Mitigation: No indirect or cumulative impacts to wetlands and riparian zones are anticipated from the proposed action.

Analysis on the Public Land Health Standard for riparian systems: The proposed drilling activities are located on private land; consequently, there would be no influence on “Public” land health. If the

<sup>1</sup> Table CO-EST2002-ASRO-02-08-County Population Estimates by Race Alone and Hispanic or Latino Origin: July 1, 2002 Source: Population Division, U.S. Census Bureau  
Release Date: September 18, 2003

proposed action was on public land, the relatively small amount of disturbance would not cause or lead towards a failure to achieve Public Land Health Standards for riparian systems.

### **INVASIVE, NON-NATIVE SPECIES**

Affected Environment: The noxious weed, cheatgrass, is present on the proposed well pad location and is a dominant component of the vegetation. Houndstongue is also scattered throughout the project area.

Environmental Consequences/Mitigation: Surface-disturbing activities provide opportunities to introduce noxious weeds to new areas or to increase the coverage of noxious weeds where they already occur. Since noxious weeds already occur in the project area, the potential for their re-establishment following construction of the proposed pads and access roads is extremely high.

#### Mitigation:

- In order to minimize the impact of noxious weeds and invasive species on the site, all disturbed areas not needed for immediate operation of the wells will be seeded with a mixture of native grasses, shrubs and forbs. A seed mix designed to reclaim the sites and deter establishment of noxious weeds is presented in the Vegetation section. The project proponent shall adhere to the specified seed mix and will continue with reclamation activities, including additional reseeding if necessary, until interim reclamation measures are achieved.
- The seed shall be certified free of noxious weeds. All seed to be applied on public land must have a valid seed test, within one year of the acceptance date, from a seed analysis lab by a registered seed analyst (Association of Official Seed Analysts). The seed lot shall contain no noxious, prohibited, or restricted weed seeds according to the All States Noxious Test and the analysis shall show no more than 0.5 percent by weight of other weed seeds.
- A Standard Condition of Approval is attached requiring the project proponent to monitor for the presence of any Colorado-listed noxious weeds at least once or twice annually during the growing season until final reclamation of the pad is complete. The project proponent will promptly treat and control any invading noxious weeds. Given that cheatgrass is already abundant on the proposed 31-26 pad location and is widespread throughout the West Fork Parachute Creek drainage, it may not be possible to totally eliminate this noxious weed from the 31-26 location. In the case of cheatgrass, if the adjacent area contains less than 50% cover of cheatgrass, interim reclamation will be considered acceptable when the cover of cheatgrass in the project area does not exceed 5%. If the cover of cheatgrass outside of the project area exceeds 50%, then the project area shall not exceed 50% cover of cheatgrass. A Pesticide Use Proposal must be approved by BLM prior to the use of herbicides.

### **MIGRATORY BIRDS**

Affected Environment: The proposed well pad would be located primarily in sagebrush and rabbitbrush with understory grasses and forbs. In addition, the pad is located within 1/8 mile of mature cottonwood tree riparian habitat. Excellent cliff nesting habitat is located within 1/8 mile of the pad just above and to the north. Given the diverse mix of vegetation and geology in the area, the well pad site and surrounding area provides cover, forage, breeding, and nesting habitat for a variety of migratory bird species. A few species found on the U.S. Fish and Wildlife Service's Birds of Conservation Concern list may be present. Within the sagebrush habitats the sage sparrow may occur. Along the mature riparian habitat the Lewis's

woodpecker may reside. Among the cliff habitats the golden eagle is known to occur, and the peregrine falcon may occur as suitable habitat exists.

Numerous raptor nests exist near the project area. Many of the nests were first identified back in the early to mid 1980's during an intensive survey effort conducted by Bio-Resources. Golden eagles are known to nest on the cliffs just above the proposed well pad. A raptor survey was completed by Westwater Engineering on May 3 & 5, 2006. No active nests were found within 1/4 mile of the proposed well pad. Two unoccupied stick nests (likely the golden eagle nests already documented) were noted within 1/8 mile of the proposed pad on the cliffs above the pad. No nests were found within the riparian habitats along West Parachute Creek where two nests previously existed per the Bio-Resources survey. A variety of raptors likely perch, roost, and forage on and near the proposed well pad. The COC 44963 lease contains no raptor timing limitations.

Environmental Consequences/Mitigation: The proposed well pad would remove a total of approximately 3-acres of upland foraging and nesting habitat. If interim reclamation is completed in a proper and timely fashion, habitat loss could be partially reduced. However, given periodic work-overs and reentry of well pads for placement of additional directional wells, vegetation at each site would have a hard time ever reaching anything but early seral condition, which would not provide adequate nesting habitat for many species. As such, proper and timely reclamation is more important for providing forage and habitat for insects, small rodents and mammals, and other avian food sources.

The removal of 3 acres of upland vegetation will result in direct and indirect habitat loss and will further fragment remaining habitats and reduce habitat connectivity and patch size for migratory birds in the area. If vegetation removal is conducted during the spring nesting season, it is possible that migratory bird nests and/or eggs could be destroyed. Although impacts to individual birds could result, impacts at the species or population levels are not anticipated. Noise associated with construction and drilling and related traffic would likely temporarily displace native birds away from the area.

The well pad location is in close proximity to several identified raptor nest sites. Based on the May, 2006 survey, no nests were active. If well pad construction and drilling occur and are completed before next breeding/nesting season (February 1, 2007) then no impacts to nesting raptors would likely result. If construction and drilling are planned to begin after February 1, 2007 but before May 15, 2007, then an up-to-date raptor survey will be required prior to commencement of work.

Mitigation:

- In the event nests are found within 1/4 mile of any proposed activity associated with this well pad, a timing limitation in the form of a COA will be applied. Specifically, if any active nests are found within 1/4 mile of any of these well pads or associated road or pipelines prior to May 15, no work will be allowed to commence from the time of occupation until all young have fledged and dispersed from the nest as documented by a qualified biologist.

**NATIVE AMERICAN RELIGIOUS CONCERNS**

Affected Environment: At present, no Native American concerns are known by the GSFO within the project area and none were identified during the inventories. The Ute Tribes claim the area as part of their ancestral homeland. If new data is disclosed by the Ute Tribes, new terms and conditions may have to be negotiated to accommodate their concerns.

Environmental Consequences/Mitigation: Indirect impacts from increased access and personnel could result in a range of impacts to unknown cultural resources from illegal collection to vandalism. The importance of the Education/Discovery Stipulation needs to be stressed to Williams and their subcontractors. A standard Education/Discovery Condition of Approval for Cultural Resource protection will be attached to the APD.

**THREATENED, ENDANGERED, AND SENSITIVE SPECIES** (includes an analysis on Standard 4)  
Affected Environment: According to the latest species list from the U. S. Fish and Wildlife Service, the following federally listed and candidate species may reside or be impacted by actions occurring in Garfield County: bald eagle, Canada lynx, Mexican spotted owl, black-footed ferret, Uinta Basin hookless cactus, Parachute beardtongue, DeBeque phacelia, yellow-billed cuckoo, razorback sucker, Colorado pikeminnow, bonytail chub, and humpback chub.

Specific to the project location, no federal or state listed species or federal candidate or proposed species or their habitat are known to occur within the project area. A botanical survey conducted in April 2006 found none of the above species in the project area. A population of the BLM Sensitive plant species, Roan Cliffs Stickleaf (*Mentzelia rhizomata*), was found on the steep, talus slopes approximately 1/8 mile upslope of the proposed well pad. Colorado River cutthroat trout, a BLM Sensitive Species, is known to occur within portions of the West Fork of Parachute Creek located adjacent to the proposed well pad and road.

Environmental Consequences/Mitigation:

Because no state or federal listed species or federal candidate or proposed species or their habitat reside in the area, and no offsite or indirect impacts are anticipated, the action should result in “**No Effect**” to any listed species.

#### *Roan Cliffs Stickleaf*

Construction of the proposed well pad and access road should result in no direct impacts to the Roan Cliffs stickleaf since the population is upslope and outside of the project area. Indirect impacts to the population could occur if the disturbance associated with the proposed action causes an expansion of noxious weeds into occupied stickleaf habitat. The Roan Cliffs stickleaf grows in relatively barren areas and does not tolerate competition well. Reclamation measures designed to promptly revegetate the disturbed areas and deter establishment of noxious weeds are presented in the Vegetation and Invasive, Non-native Species sections. These actions should prevent indirect impacts to the Southwest stickleaf.

#### *Colorado River cutthroat trout*

Well pad, pipeline, and road construction will disturb approximately 3-acres of upland vegetation. This increases the chance for erosion that can result in sedimentation of resident streams. Cutthroat trout are especially sensitive to increased sediment loads that can impair preferred spawning habitats by smothering eggs and reducing oxygen exchange and by covering gravel substrates. Sediment also reduces aquatic insect productivity which impacts food resources for trout and other wildlife.

In addition to sediment concerns, natural gas development in close proximity to live streams containing fish increases the risks of water contamination, as well as the risks of pipeline and vehicle spills which can have direct negative effects to individual fish and cutthroat populations. These impacts can not really be mitigated other than to make sure that BMP's that address spills or leaks are in place and are being properly implemented.

If timely and proper reclamation is conducted on all disturbed surface areas (roads, well pads, pipelines), and BMP's to control offsite sedimentation are implemented, then sedimentation concerns should be reduced. However, increases in road use will continue to increase the risk and amount of erosion and sediment that enters into West Fork Parachute Creek over time.

Mitigation:

- To minimize erosion concerns, all road surfaces shall be graveled and made all weather passable. This will reduce rutting, and erosion concerns.
- To minimize disturbance and increase acres of reclamation, gathering facilities should be consolidated at one location to allow for more acres of disturbed portions of pads to be reclaimed.

Analysis on the Public Land Health Standard for Threatened & Endangered species: The fieldwork portion of the Land Health Assessment for this watershed was conducted in 2004 and the Report was signed in 2005. The project area addressed in this EA was not looked at as it is on private surface lands. The continuation of intensive natural gas development within the watershed will continue to downgrade the overall condition of the watershed and hamper its ability to maintain/meet Standard 4 for Threatened, Endangered, and BLM Sensitive Species.

**WASTES, HAZARDOUS OR SOLID**

Affected Environment: All wastes will be managed in accordance with the applicable Oil and Gas regulations and On-Shore Orders.

**WATER QUALITY, SURFACE AND GROUND** (includes an analysis on Standard 5)

Affected Environment:

Surface Water: The proposed action lies northeast, approximately 200 feet, of the West Fork of Parachute Creek and is separated by an existing gravel road. The West Fork is a perennial stream with runoff events consisting of spring snowmelt and short duration high intensity summer thunderstorms. The drainage contains a narrow riparian corridor dominated by cottonwoods. Downstream, the West and Middle Forks form Parachute Creek which is a tributary to the Colorado River at the Town of Parachute.

The State of Colorado has developed *Stream Classifications and Water Quality Standards* (CDPHE, Water Quality Control Commission, Regulation No. 37) that identify beneficial uses of water and numeric standards used to determine allowable concentrations of water quality parameters. The West Fork of Parachute Creek from West Fork Falls (approximately 3.4 stream miles upstream of the proposed action) to the confluence with Parachute Creek (approximately 1.9 stream miles downstream of the proposed action) is designated as a use-protected stream segment. The use-protected designation refers to waters that the State of Colorado has determined do not warrant the level of protection provided by the outstanding waters designation or the antidegradation rule (CDPHE, Water Quality Control Commission, Regulation No. 31).

This segment is classified aquatic life cold 2, recreation 2, and agriculture. Aquatic life cold class 2 refers to waters not capable of sustaining a wide variety of cold water biota due to habitat, flows, or uncorrectable water quality conditions. Recreation class 2 refers to stream segments where primary contact recreation does not exist and is unforeseeable. At this time there is no current water quality data for the West Fork of Parachute Creek. Numeric standards include a comprehensive list of physical, biological, inorganic, and metal standards that have been established to protect the designated uses above.

The State of Colorado has developed a *303(d) List of Water Quality Limited Segments Requiring TMDLS* (CDPHE, Water Quality Control Commission, Regulation No. 93) that identifies stream segments that are not currently meeting water quality standards with technology based controls alone. The West Fork of Parachute Creek is within the Lower Colorado River Basin segment COLCLC04a that consists of tributaries to the Colorado River from the Roaring Fork to Parachute Creek. This segment is listed for selenium and has been given medium priority.

The State of Colorado has developed a *Monitoring and Evaluation List* (CDPHE, Water Quality Control Commission, Regulation No. 94) that identifies water bodies suspected to have water quality problems. The West Fork of Parachute Creek has not been identified as a portion of segment COLCLC04a suspected to have water quality problems.

Environmental Consequences/Mitigation: Proposed activities would temporarily remove soil and vegetation resulting in an increase in erosion potential and offsite sedimentation. With measures to control runoff water in place, reestablishment of vegetation, and proper engineering of roads; the potential for sediment transport to the channel would be minimized. The following mitigation measures will be implemented to protect surface water.

Mitigation:

- The operator will consult with the State of Colorado Water Quality Control Division regarding stormwater discharge permits prior to commencing construction activities. All construction activities that disturb one acre or greater require a stormwater discharge permit. Written documentation to the Authorized Officer is required to indicate that appropriate permits have been obtained or are not required by the permitting agency.
- Roads will be crowned, ditched, surfaced, and constructed to BLM Gold Book standards.
- Well pads will be constructed to BLM Gold Book standards. Fill slopes will be seeded to minimize erosion and protected with silt fences to prevent sediment from leaving the site.
- An engineered reserve pit will be required to store drilling muds, cuttings, fracing material, and any other byproducts of production activities.
  - The reserve pit will consist of a synthetic impermeable liner with a permeability of less than  $10^{-7}$  cm/sec. The liner will be properly installed so as not to leak and compatible with all anticipated materials. Liner thickness will be at least 12 mils and resistant to UV rays, chemicals, and punctures.

Analysis on the Public Land Health Standard for water quality: The proposed action with associated mitigation would not likely prevent standard 5 for water quality from being met.

Ground Water: This action is not projected to have any noticeable impacts on ground water resources within the project area. The nearest water wells are located about 1 mile downstream along Parachute Creek. The water wells are likely shallow wells completed in the alluvial aquifer. Usable water may also occur in lenticular sands in the underlying Wasatch. No "regional" continuous bedrock aquifer is known to be present. Surface casing would be set to about 2500' in the wells, which would provide adequate protection for water zones currently being utilized. In addition, the standard COA would be included which requires cementing across any usable water zones encountered below the surface casing.

## **NON-CRITICAL ELEMENTS**

The following elements **must** be addressed due to the involvement of Standards for Public Land Health:

### **SOILS** (includes a analysis on Standard 1)

Affected Environment: The proposed action would include the construction of approximately 200 feet of new access road and a new well pad approximately 3 acres in size. The soil map from the *Soil Survey of Rifle Area, Colorado: Parts of Garfield and Mesa Counties* (USDA Soil Conservation Service, 1985) indicates that the proposed pad and access road are located on the soil map unit Nihill channery loam.

This map unit typically occurs on slopes from 6 to 25% and is a deep, well drained, moderately sloping to hilly soil found on alluvial fans and valley sides. Erosion hazard is severe and surface runoff is slow. Primary uses for this soil include grazing and wildlife habitat.

Environmental Consequences/Mitigation: There would be some soil loss, loss of soil productivity, and an increase in sediment available for transport resulting from construction of the new access road and well pad. Due to the close proximity of the proposed action to the West Fork of Parachute Creek, the following mitigation measures will be implemented to minimize potential negative impacts associated with soil loss and transport.

- Reclamation measures such as contouring disturbed areas, roughing the soil surface, re-vegetating, and controlling runoff will minimize soil erosion and transport by stabilizing areas and capturing sediment.
- Due to the severe erosion potential of the area soils, the proposed access road will be crowned, ditched, graveled, and include drainage features in accordance with BLM Gold Book standards. In addition, the proposed well pad will be constructed to BLM Gold Book standards and include Best Management Practices (BMPs) designed to minimize erosion and offsite sedimentation.
- Roads should be periodically re-graveled when ruts exceed 6 inches in depth or as directed by the authorized officer. Initial gravel application will be a minimum of 4 inches.

Analysis on the Public Land Health Standard for upland soils: The proposed action would not likely prevent standard 1 from being achieved.

### **VEGETATION** (includes an analysis on Standard 3)

Affected Environment: The vegetation on the proposed pad consists primarily of an overstory of basin big sagebrush, snowberry and rubber rabbitbrush, with an herbaceous layer dominated by cheatgrass. Other species present include skunkbush sumac, Louisiana sagewort, Indian ricegrass, and houndstongue.

Environmental Consequences/Mitigation: The proposed well pad would remove a total of approximately 3-acres of upland habitat. In order to accommodate access to and operation of the wells, approximately half of the total disturbance would remain unvegetated for the life of the wells. If completed in a proper and timely fashion, interim reclamation could restore native herbaceous vegetation on the unused portions of the pad and road within 2-3 years. The establishment of mature shrubs may take 5-15 years. However, given periodic workovers and the potential for additional well bores to be drilled from this pad, it is likely that vegetation would remain in an early seral stage for the life of the wells.

Mitigation:

- The following seed mix will be used on any disturbed area as a result of this proposed action to help establish desirable native vegetation, to maintain big game winter range habitat and to minimize the presence of and potential for expansion of noxious weeds:

<u>Species of Seed</u>	<u>Variety</u>	<u>Application Rate (PLS/acre)</u>
Four-wing saltbush		6.0
Gardner saltbush		2.0
Indian ricegrass	Paloma	1.0
Bottlebrush squirreltail		2.0
Western wheatgrass	Arriba	3.0
Bluebunch wheatgrass	P-7	2.0
<u>Scarlet globemallow</u>		<u>0.50</u>
Total		16.5

Additional mitigating measures are included in the Conditions of Approval for this action.

Analysis on the Public Land Health Standard for plant and animal communities (partial, see also Wildlife, Aquatic and Wildlife, Terrestrial): The fieldwork portion of the Land Health Assessment for this watershed was conducted in 2004 and the Report was signed in 2005. The project area addressed in this EA was not looked at as it is on private surface lands. The proposed action, by itself, should not result in a failure to meet Standard 3 for healthy plant communities. However, the continuation of intensive natural gas development within the watershed will continue to downgrade the overall condition of the vegetation within the watershed and hamper its ability to maintain/meet Standard 3 for healthy plant and animal communities.

**WILDLIFE, AQUATIC** (includes an analysis on Standard 3)

Affected Environment: The proposed well pad, road, and pipeline are located next to the West Fork of Parachute Creek, which flows into Parachute Creek. The West Fork of Parachute Creek and Parachute Creek both contain aquatic wildlife including Colorado River cutthroat trout – addressed above.

Environmental Consequences/Mitigation: Well pad, pipeline, and road construction activities will all disturb soils and remove vegetation. A total of approximately 3 acres of upland habitat will be lost. This will increase the potential for erosion that can result in sedimentation of resident streams. Trout are especially sensitive to increased sediment loads that can impair preferred spawning habitats by silting in substrates. This can result in the smothering of eggs, and/or reduction of oxygen exchange. Sediment also reduces aquatic insect productivity which impacts food resources for trout and avian and terrestrial wildlife.

In addition to sediment concerns, natural gas development in close proximity to live streams containing fish increases the risks of water contamination, as well as the risks of pipeline and vehicle spills which can have direct negative effects to individual fish and fish populations. These impacts can not really be mitigated other than to make sure that BMP's that address spills or leaks are in place and are being properly implemented.

If timely and proper reclamation is conducted to all disturbed surface areas then sedimentation concerns should be reduced. However, increases in road use will continue to increase the risk of erosion and sediment into Parachute Creek over a long period of time (>20 years).

## Mitigation:

- To minimize erosion concerns, all constructed or upgraded road surfaces shall be graveled and made all weather passable. Appropriate water dips and culverts should be incorporated as well. This will reduce rutting, and erosion concerns.

Analysis on the Public Land Health Standard for plant and animal communities (partial, see also Vegetation and Wildlife, Terrestrial): A formal Land Health Assessment was completed in 2004. The specific areas addressed in this EA were not looked at as they are private surface locations. The continuation of intensive natural gas development within the larger watershed will continue to hamper the watershed's ability to maintain/meet Standard 3 for aquatic wildlife, as streams continue to be impaired by increased sediment loads.

### **WILDLIFE, TERRESTRIAL** (includes an analysis on Standard 3)

Affected Environment: The proposed well pad would be located within sagebrush/rabbitbrush vegetation with understory grasses and forbs. A variety of wildlife species may be found in the area. The area provides cover, forage, and breeding habitat for a variety of big game, small game, and non-game mammals, birds, and reptiles. The proposed well pad is located in mapped big game winter range. The COC 44963 lease contains a big game winter timing limitation (January 15 to April 30).

Environmental Consequences/Mitigation: The proposed action will result in the removal of approximately 3 acres of upland habitat. The action will result in direct and indirect habitat loss and will further fragment remaining habitats and reduce habitat connectivity and habitat patch size. Losses of forage and cover will result. Increased human use in the area will likely displace some animals away from preferred habitats.

Other general impacts (short term, long term, and cumulative) to terrestrial wildlife were adequately addressed in the 1999 FSEIS. Standard measures are incorporated into the APD along with other measures (i.e., automatic well reporting, and reclamation) to conform to the FSEIS that will help to mitigate wildlife impacts. Public access and use of the roads for all the proposed well sites will be limited due to controlled access on private lands. This will minimize some disturbance and reduce effective habitat loss.

Analysis on the Public Land Health Standard for plant and animal communities (partial, see also Vegetation and Wildlife, Aquatic): A formal Land Health Assessment was completed in 2004. The specific areas addressed in this EA were not specifically looked at as they are private surface locations. Large portions of the watershed were found to not be meeting or were trending away from meeting Standard 3 for terrestrial wildlife. The proposed action will result in further loss and fragmentation of habitats important to many wildlife species and will further trend the watershed away from the attainment of Standard 3 for terrestrial wildlife.

**THRESHOLD ANALYSIS FOR WILDLIFE AND WILDLIFE HABITAT MITIGATION:** In the FSEIS Record of Decision (March 1999) on page 14 it states that: *“Within high value or crucial big game winter range, the operator is required to implement specific measures to reduce impacts of oil and gas operations on wildlife and wildlife habitat. . . Measures to reduce impacts would generally be considered when well density exceeds four wells per 640 acres, or when road density exceeds three miles of road per 640 acres.”* Furthermore, Lease Notice GS-LN-05 states: *“Within high value or crucial big game winter range, the operator is required to implement specific measures to reduce impacts of oil and gas operations on wildlife and wildlife habitat.”*

The road and well density thresholds will not be exceeded via implementation of the proposed action. As such offsite or replacement mitigation measures to reduce impacts to wildlife are not currently being considered. However, as future activity increases in the area, it is possible that mitigation will be necessary to offset habitat loss and fragmentation. Cumulative impacts will be monitored over time and as future development increases a Geographical Area Plan (GAP) may be initiated, it is possible that mitigation will be sought to offset habitat loss and fragmentation. Cumulative impacts would be addressed in greater detail within the GAP and mitigation opportunities would be identified and pursued.

## **VISUAL RESOURCES**

Affected Environment: The proposed project area is located in areas classified as VRM Class II in the GSRA 1984 Resource Management Plan. The objective of this VRM Class II is to retain the existing characteristic landscape. The level of change in any of the basic landscape elements (line, form, color, texture) due to management activities should be low and not evident.

The protection of VRM classes, landscape character and scenic quality on private and public lands and split estate is discussed on pages 3-41 through 3-45 of the FSEIS. The proposed action takes place on private surface. Visual resource management objectives do not apply to non-BLM lands, but visual concerns may be addressed on split estate. VRM classes shown for non-public lands are an indication of the visual values for those lands, and those values are only protected by landowner discretion. The impacts of development are discussed on pages 4-49 through 4-54 of the FSEIS. The proposed action will not affect any of the key viewing areas or viewsheds described in the FSEIS. In particular, the proposed action will not be seen from the key viewing areas of the 1-70 corridor, county roads, or the town of Rifle. The proposed action will be visible from West Fork of Parachute Creek and for the purpose of the analysis will be used for KOPS.

Environmental Consequences/Mitigation: The construction of new pads, supporting infrastructure and improved access roads will create long term contrasts in the valley floors within the existing landscape by removing the existing vegetation and exposing bare ground. The new disturbances will produce visual contrasts in color, line, form and texture. Interim reclamation of the well pad, cut of fills along the pads and access roads with seeded shrub and grass species would reduce some of the contrast after two to three growing seasons. However, long term visual impacts are expected on all locations. While this Class II site is not visible from any county road, it will be visible from the access road up West Fork of Parachute Creek. The proposed action will be evident within the landscape and would not meet VRM Class II objectives, however, those objective are only protected by landowner discretion. The following mitigation should reduce contrasts on this location:

### Mitigation:

Vegetation removal should be kept to a minimum and should avoid straight lines wherever possible on both the pad and the access roads.

A Condition of Approval will be applied to require all above ground facilities (including containment rings) to be painted a flat standard environmental determined during on-site reviews to be color that blends in with the surrounding landscape. The facilities should be placed against the cut side of the pad, where feasible.

## **GEOLOGY AND MINERALS**

### Affected Environment/Environmental Consequences/Mitigation:

The target gas zones for the proposed directional wells are the “tight sands” within the lower part of the Williams Fork Formation (Mesaverde Group). The shallower Wasatch G sands will be evaluated but are generally not an economic target at present. All of the coal zones are too deep for currently economic underground mining. The production casing would be cemented from total depth to at least 200 feet above the top of the Mesaverde, which would isolate all formations and gas zones and prevent migration of any gas or fluids from one zone to another. Cement would also be placed across the G sands if they are determined to contain producible hydrocarbons.

## **NOISE**

Environmental Consequences/Mitigation: There will be increased levels of noise during the construction, drilling, and completion phases of the proposed action. The noise will be most noticeable along the roads used to haul equipment and at the well site. Drilling activities are subject to noise abatement procedures as defined in the Colorado Oil and Gas Conservation Commission Rules and Regulations (Aesthetic & Noise Control Regulations).

## **PALEONTOLOGY**

Affected Environment: The proposed wells, pipeline and access road fall within a Condition I area for possible sites of paleontological or scientific value. However, dense soil and vegetation cover rock outcrops and as a result a paleontological survey would not be required for those specific potentially fossiliferous areas prior to BLM project authorization. If scientifically important fossils are discovered during construction activities and cannot be avoided, mitigation may be necessary.

All persons associated with operations under this authorization should be informed that any objects or sites of paleontological value, such as vertebrate or scientifically important invertebrate fossils, should not be destroyed, damaged or removed.

Environmental Consequences/Mitigation: A standard Education/Discovery Condition of Approval for Paleontology Resource protection will be attached to the APDs.

## OTHER NON-CRITICAL ELEMENTS:

### **ACCESS AND TRANSPORTATION**

Affected Environment: The project location is reached by traveling north from Parachute, Colorado, on Garfield County road approximately nine miles. Then follow the West Fork of Parachute Creek to the location.

Environmental Consequences/Mitigation: Truck traffic would be heaviest during rig-up, completion activities, and rig moves. The proposed drilling and completion activities are scheduled to begin in June 2006. Year around road use is anticipated to service the private surface and mineral drilling activity in the area. The increase in road use for this location will not substantially increase total use and impact to the area.

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
Travel/Access			X
Cadastral Survey	X		
Fire/Fuels Management	X		
Forest Management	X		
Geology and Minerals			X
Hydrology/Water Rights			X
Law Enforcement	X		
Paleontology			X
Noise			X
Range Management	X		
Realty Authorizations	X		
Recreation	X		
Socio-Economics			X
Transportation			X
Visual Resources			X

**CUMULATIVE IMPACTS SUMMARY:** The 2004 Draft Roan Plateau Resource Management Plan Amendment & Environmental Impact Statement released in November, 2004 (DEIS, 2004) analyzed 5 alternatives for oil and gas development in the Roan Plateau planning area. These alternatives assessed impacts, including cumulative impacts, for oil and gas development scenarios ranging from 855 to 1582 new gas wells on public lands. The drilling of the wells addressed in this Environmental Assessment is well below the low range of development analyzed in the DEIS.

Since the completion of the 1999 Oil and Gas Leasing and Development FSEIS, the number of wells analyzed in subsequent NEPA documents has exceeded the 230 federal wells forecast in the RFD for lands outside the NOSR Production Area. However, drilling technology advancements has drastically reduced the expected surface disturbance of 3.4 acres per well or 1,020 acres from Federal wells analyzed in the 1999 FSEIS. The FSEIS analysis was based on a reasonably foreseeable development scenario, including the numbers of wells, well spacing, equipment necessary, and assumed emission rates. Since completion of the FSEIS, the majority of new wells have been drilled directionally and, in many instances, are being drilled from existing well pads, thereby reducing the overall anticipated surface impact addressed in the 1999 FSEIS.

The air quality analysis conducted in the 2004 DEIS does assess the impacts to the airshed from oil and gas development within and around the Roan Plateau Planning Area. The proposed action addressed in this document, which could include well pad and/or road construction, well drilling and well completion work typical for oil and gas development, would not represent a significant increase in emissions relative to the emissions assumed in the 2004 DEIS

INTERDISCIPLINARY REVIEW:

<u>Name</u>	<u>Title</u>	<u>Area of Responsibility</u>
Rick Haskins	Natural Resource Specialist	Team Leader
Cheryl Harrison	Archaeologist	Cultural Resources, Native American Religious Concerns
Tom Fresques	Wildlife Biologist	Terrestrial & Aquatic Wildlife, Special Status Wildlife Species
Carla Scheck	Ecologist	Special Status Plants, Vegetation, Noxious Weeds
Bruce Fowler	Geologist	Ground Water/Minerals
Harley Armstrong	Paleontologist	Paleontology
Marty O'Mara	Petroleum Engineer	Downhole Conditions of Approval
Brian Hopkins	Community Planner	Transportation, Recreation
Kay Hopkins	Outdoor Recreation Planner	Visual Resources
Jeff O'Connell	Hydrologist	Air, Floodplains, Surface Water, Riparian, Soils
Mike McGuire	Rangeland Management Specialist	Range

**FONSI**

**CO-140-2006-087EA**

**Williams Production RMT Company  
Proposal to Drill six (6) wells from one well pad in the Red Point area.  
RPW 31-26-596, RPW 41-26-596, RPW 331-26-596,  
RPW 431-26-596, RPW 441-26-596, RPW 541-26-596**

The environmental assessment and analyzing the environmental effects of the proposed action have been reviewed. The proposed action with any approved mitigation measures result in a Finding of No Significant Impact on the human environment. Therefore, an environmental impact statement is not necessary to further analyze the environmental effects of the proposed action.

**DECISION RECORD**

DECISION: It is my decision to approve the Red Point Wells 31-26-596, 41-26-596, 331-26-596, 431-26-596, 441-26-596, and 541-26-596 as outlined in the Environmental Assessment with the Conditions of Approval in order to provide for the orderly, economical and environmentally sound exploration and development of oil and gas resources on valid oil and gas leases.

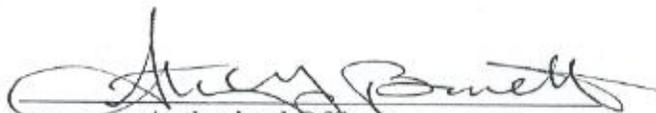
RATIONALE:

1. Approval of the proposed action is validating the rights granted with the federal oil and gas leases to develop the leasehold to provide commercial commodities of oil and gas.
2. The environmental impacts have been mitigated with measures included in the Surface Use Plan and the attached Conditions of Approval.

MITIGATION MEASURES: Mitigation measures are included in the Surface Use Plan and Conditions of Approval for both surface and drilling operations.

NAME OF PREPARER: Rick Haskins, Natural Resource Specialist

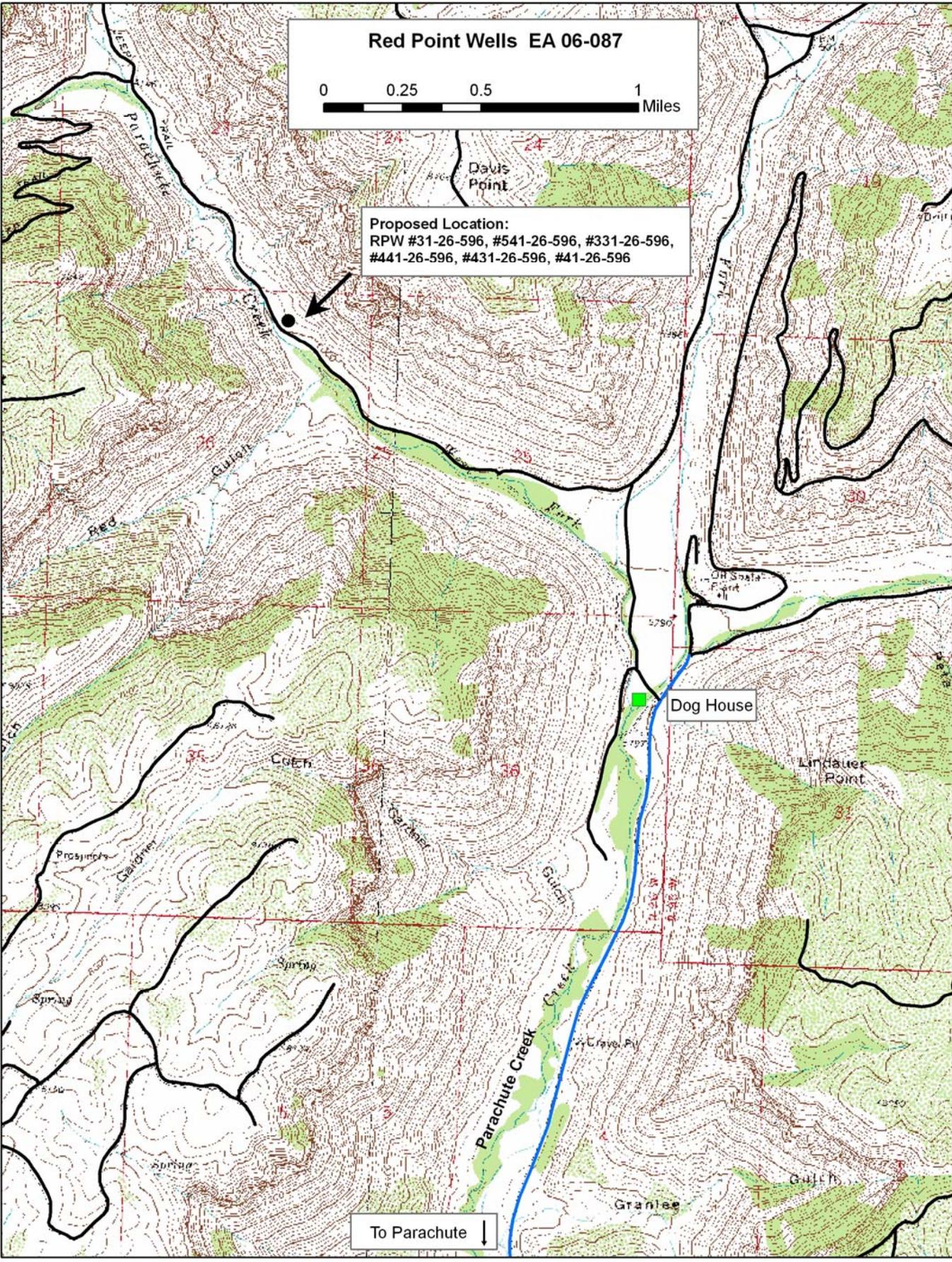
SIGNATURE OF AUTHORIZED OFFICIAL:

  
Authorized Officer

DATE SIGNED:

6-8-06

Attachments: map, Conditions of Approval



**Red Point Wells EA 06-087**

0 0.25 0.5 1 Miles

**Proposed Location:**  
RPW #31-26-596, #541-26-596, #331-26-596,  
#441-26-596, #431-26-596, #41-26-596

**Dog House**

To Parachute ↓

CONDITIONS OF APPROVAL  
APPLICATION FOR PERMIT TO DRILL

Company/Operator: **Williams Production RMT Company**

	<b>Surface Location</b>	NWNE Sec 26, T05S, R96W	
<b>Well Name</b>	<b>Well No.</b>	<b>Bottom Hole Location</b>	<b>Lease</b>
RPW	31-26-596	NWNE Sec 26, T05S, R96W	COC-44963
RPW	41-26-596	NENE Sec 26, T05S, R96W	COC-44963
RPW	331-26-596	NWNE Sec 26, T05S, R96W	COC-44963
RPW	431-26-596	NWNE Sec 26, T05S, R96W	COC-44963
RPW	441-26-596	NENE Sec 26, T05S, R96W	COC-44963
RPW	541-26-596	NENE Sec 26, T05S, R96W	COC-44963

**NOTIFICATION REQUIREMENTS**

- Location Construction - at least forty-eight (48) hours prior to construction of location and access roads.
- Spud Notice - at least twenty-four (24) hours prior to spudding the well.
- Casing String and Cementing - at least twenty-four (24) hours prior to running casing and cementing all casing strings.
- BOP and Related Equipment Tests - at least twenty-four (24) hours prior to initiating pressure tests.
- First Production-Notice - within five (5) business days after new well begins, or production resumes after well has been off production for more than ninety (90) days.
- Reclamation - At least (24) hours prior to re-shaping the well pad.

For more specific details on notification requirements, please check the Conditions of Approval for Notice to Drill and Surface Use Program.

**APD approval is valid for a period of one (1) year from the signature date. An extension period may be granted, if requested, prior to the expiration of the original approval period.**

Please contact Marty O’Mara (970) 947-5221 of the Glenwood Springs Energy office at least 24 hours prior to spud.

Please contact Steve Ficklin (970) 947-5213 or Jennifer Gallegos (970) 947-5220 of the Glenwood Springs Energy office at least 24 hours prior to running the surface and production casing and conducting the BOP test.

**DOWNHOLE CONDITIONS OF APPROVAL FOR NOTICE TO DRILL  
FEDERAL PAD**

1. The TOC for the production casing needs to be a minimum of 200' above the Mesa Verde Formation either during the primary cement job or through remedial cementing. The TOC for each well must be a minimum depth of:

	<b>Minimum TOC</b>	
<u>Well No.</u>	<u>MD</u>	<u>TVD</u>
31-26-596	5164'	5040'
41-26-596	5184'	5110'
331-26-596	5106'	5030'
431-26-596	5066'	5055'
441-26-596	5262'	5140'
541-26-596	5112'	5095'

2. A cement bond log (CBL) will be run from the production casing shoe to TOC and shall be utilized to determine the bond quality for the production casing.
3. Any usable water zones encountered below the surface casing shall be isolated and or protected by cementing across the zone. The minimum requirement is to cement from 50 feet above to 50 feet below each usable water zone encountered.
4. Utilize the same logging requirements as set forth in the Williams Piceance Master APD May 1, 2006 Revision.

## **REGULATORY REMINDERS**

Approval of this application does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.

All drilling operations, unless otherwise specifically approved in the APD, must be conducted in accordance with Onshore Oil and Gas Order No. 2.

All lease and/or unit operations will be conducted in such a manner that full compliance is made with applicable laws, regulations (43 CFR 3100), Onshore Oil and Gas Orders, and the approved plan of operations. The operator is fully responsible for the actions of his subcontractors.

A copy of the approved application for permit to drill (APD), including the conditions of approval and accompanying surface use plan will be furnished to the field representative by the operator to insure compliance and will be available to authorized personnel at the drillsite whenever active construction or drilling operations are underway.

**Be aware fire restrictions may be in effect when location is being constructed and/or when well is being drilled. Contact the appropriate Surface Management Agency for information.**



## EPA'S LIST OF NONEXEMPT EXPLORATION AND PRODUCTION WASTES

While the following wastes are nonexempt, they are not necessarily hazardous.

- Unused fracturing fluids or acids
- Gas plant cooling tower cleaning wastes
- Painting wastes
- Oil and gas service company wastes, such as empty drums, drum rinsate, vacuum truck rinsate, sandblast media, painting wastes, spent solvents, spilled chemicals, and waste acids
- Vacuum truck and drum rinsate from trucks and drums, transporting or containing nonexempt waste
- Refinery wastes
- Liquid and solid wastes generated by crude oil and tank bottom reclaimers
- Used equipment lubrication oils
- Waste compressor oil, filters, and blowdown
- Used hydraulic fluids
- Waste solvents
- Waste in transportation pipeline-related pits
- Caustic or acid cleaners
- Boiler cleaning wastes
- Boiler refractory bricks
- Incinerator ash
- Laboratory wastes
- Sanitary wastes
- Pesticide wastes
- Radioactive tracer wastes
- Drums, insulation and miscellaneous solids.

## SURFACE USE CONDITIONS OF APPROVAL

Lease COC 44963

RPW 31-26-596  
RPW 41-26-596  
RPW 331-26-596  
RPW 431-26-596  
RPW 441-26-596  
RPW 541-26-596

1. At least forty-eight (48) hours prior to construction of access road and/or well pad, operator will notify BLM representative of construction startup plans.
2. Operator will consult the State of Colorado Water Quality Control Division (for stormwater permits) prior to commencing construction activities related with said permit within the proposed action area. Written documentation to the Authorized Officer is required to indicate that appropriate permits have been obtained or are not required by the permitting agencies.
3. The paint color to be use on all surface facilities, including metal containment rings is Desert Brown (10yr 6/3). The facilities should be placed against the cut side of the pad, where feasible.
4. The operator is responsible for applying dust abatement measures as needed or directed by the Authorized Officer. The level and type of treatment (watering or application of various dust agents, surfactants and road surfacing material) may be changed in intensity and must be approved by the Authorized Officer. Dust control is needed to prevent heavy plumes of dust from road use that create safety problems and disperses heavy amounts of particulate matter on adjacent vegetation.
5. Operator will be responsible for providing timely year-round road maintenance and cleanup on the access road. A regular schedule for maintenance will include, but not be limited to, blading, ditch and culvert cleaning, road surface replacement and dust abatement. The road will be crowned, ditched, and drained with culverts and/or water dips. Initial gravel application will be a minimum of 4 inches. When rutting within the traveled way becomes greater then 6 inches, gravel will be applied as approved by the Authorized Officer.

To minimize erosion concerns, all constructed or upgraded road surfaces shall be graveled and made all weather passable in accordance with Gold Book standards. Appropriate water dips and culverts should be incorporated as well. This will reduce rutting, and erosion concerns.

Well pads will be constructed to BLM Gold Book standards.

6. The reserve pit will consist of a synthetic impermeable liner with a permeability of less than  $10^{-7}$  cm/sec. The liner will be properly installed so as not to leak and compatible with all anticipated materials. Liner thickness will be at least 12 mils and resistant to UV rays, chemicals, and punctures.
7. The operator is responsible for monitoring the project area at least once or twice annually during the growing season until final reclamation is complete to detect the presence of any noxious weeds that may

have established. All State-listed noxious weeds, which may be introduced due to soil disturbance associated with the proposed lease operations, will be treated promptly by methods to be approved by the Authorized Officer. A Pesticide Use Proposal (PUP) is required prior to use of any pesticide. Monitoring and treatment will continue until final reclamation is complete.

This will apply to all noxious weeds other than cheatgrass. In the case of cheatgrass, if the adjacent area contains less than 50% cover of cheatgrass, interim reclamation will be considered acceptable if the cover of cheatgrass in the project area does not exceed 5%. If the cover of cheatgrass outside of the project area exceeds 50%, then the project area shall not exceed 50% cover of cheatgrass. (1999 DSEIS Appendix E)

#### 8. Cultural Resource Education/Discovery

All persons in the area who are associated with this project must be informed that if anyone is found disturbing historic, archaeological, or scientific resources, including collecting artifacts, the person or persons will be subject to prosecution.

Pursuant to 43CFR10.4(g), the BLM authorized officer must be notified, by telephone, with written confirmation, immediately upon the discovery of human remains, funerary items, sacred objects, or objects of cultural patrimony. Further, pursuant to 43CFR10.4 (c) and (d), activities must stop in the vicinity of the discovery and the discovery must be protected for 30 days or until notified to proceed by the authorized officer.

If in connection with operations under this contract the project proponent, his contractors, subcontractors, or the employees of any of them, discovers, encounters or becomes aware of any objects or sites of cultural or paleontological value or scientific interest such as historic or prehistoric ruins, graves or grave markers, fossils, or artifacts, the proponent shall immediately suspend all operations in the vicinity of the cultural or paleontological resource and shall notify the BLM authorized officer of the findings (16 U.S.C. 470h-3, 36CFR800.112). Operations may resume at the discovery site upon receipt of written instructions and authorization by the authorized officer. Approval to proceed will be based upon evaluation of the resource. Evaluation shall be by a qualified professional selected by the authorized officer from a federal agency insofar as practicable. When not practicable, the holder shall bear the cost of the services of a non-federal professional.

Within five working days the authorized officer will inform the holder as to:

- whether the materials appear eligible for the National Register of Historic Places;
- the mitigation measures the holder will likely have to undertake before the site can be used (assuming in situ preservation is not necessary); and,
- a time frame for the authorized officer to complete an expedited review under 36 CFR 800.11, or any agreements in lieu thereof, to confirm through the State Historic Preservation Officer that the findings of the authorized officer are correct and the mitigation is appropriate.

The proponent may relocate activities to avoid the expense of mitigation and/or the delays associated with this process, as long as the new area has been appropriately cleared of resources and the exposed materials are recorded and stabilized. Otherwise, the proponent will be responsible for mitigation costs. The authorized officer will provide technical and procedural guidelines for the conduct of mitigation. Upon verification from the authorized officer that the required mitigation has been completed, the proponent will then be allowed to resume construction.

Antiquities, historic, prehistoric ruins, or objects of scientific interest that are outside of the authorization boundaries but directly associated with the impacted resource will also be included in this evaluation and/or mitigation.

Antiquities, historic, prehistoric ruins, or objects of scientific interest, identified or unidentified, that are outside of the authorization and not associated with the resource within the authorization will also be protected. Impacts that occur to such resources, which are related to the authorizations activities, will be mitigated at the proponent's cost including Native American consultation cost.

#### 9. Paleontological Resource Education/Discovery

All persons associated with operations under this authorization must be informed that any objects or sites of paleontological or scientific value, such as vertebrate or scientifically important invertebrate fossils, shall not be damaged, destroyed, removed, moved or disturbed. If in connection with operations under this authorization any of the above resources are encountered the proponent shall immediately suspend all activities in the immediate vicinity of the discovery that might further disturb such materials and notify the BLM authorized officer of the findings. The discovery must be protected until notified to proceed by the authorized officer.

As feasible, the proponent shall suspend ground-disturbing activities at the discovery site and immediately notify the BLM authorized officer of any finds. The BLM authorized officer will, as soon as feasible, have a BLM-permitted paleontologist check out the find and record and collect it if warranted. If ground-disturbing activities cannot be immediately suspended, the proponent shall work around or set the discovery aside in a safe place to be accessed by the BLM-permitted paleontologist.

10. Refer to Appendix I. Surface Reclamation of the 6/98 GSFO's Draft Supplemental EIS for Oil & Gas Leasing Development (pages I-1 through I-8) for specific reclamation goals, objectives, timelines, measures and monitoring methods. These guidelines will be followed in completing the reclamation of disturbed surfaces on well pads, access roads and pipelines.

Some effective practices that will be implemented during reclamation include, but are not limited to: proper siting of the well pad to minimize impacts, the immediate seeding of disturbed areas after construction, proper storage and redistribution of topsoil, reshaping cut and fill slopes, seeding with specified seed mix within the first available growing season after disturbance, deep ripping (>18 inches on 2 foot centers), fencing reclaimed areas to protect from livestock use, and the use of riprap, slash or other erosion control structures to help control sediment loss.

The 4 Reclamation Categories defined on Page I-8 of Appendix I (6/98 GSFO's Draft Supplemental EIS for Oil & Gas Leasing Development) will be used in gauging the progress of reclamation monitoring.

In order to minimize the impact of noxious weeds and invasive species on the site, all disturbed areas not needed for immediate operation of the wells will be seeded with a mixture of native grasses, shrubs and forbs. A seed mix designed to reclaim the sites and deter establishment of noxious weeds is listed below. The seed shall be certified free of noxious weeds.

#### Seed Mix Application Practices

The surface owner may determine the seed mix to be used in the revegetation of the well pad location, access road, pipeline right-of-ways and any other disturbed areas as a result of lease operations.

In the event the surface owner does not provide this information:

The following seed mix will be used on any disturbed area as a result of this proposed action to help establish desirable native vegetation, to maintain big game winter range habitat and to minimize the presence of and potential for expansion of noxious weeds:

<u>Species of Seed</u>	<u>Variety</u>	<u>Application Rate (PLS/acre)</u>
<b>Four-wing saltbush</b>		<b>6.0</b>
<b>Gardner saltbush</b>		<b>2.0</b>
<b>Indian ricegrass</b>	<b>Paloma</b>	<b>1.0</b>
<b>Bottlebrush squirreltail</b>		<b>2.0</b>
<b>Western wheatgrass</b>	<b>Arriba</b>	<b>3.0</b>
<b>Bluebunch wheatgrass</b>	<b>P-7</b>	<b>2.0</b>
<b><u>Scarlet globemallow</u></b>		<b><u>0.50</u></b>
<b>Total</b>		<b>16.5</b>

The above rate of application is listed in pounds of pure live seed (PLS)/acre. The seed shall be certified free of noxious weeds. All seed to be applied must have a valid seed test, within one year of the acceptance date, from a seed analysis lab by a registered seed analyst (Association of Official Seed Analysts). The seed lot shall contain no noxious, prohibited, or restricted weed seeds according to the All States Noxious Test and the analysis shall show no more than 0.5 percent by weight of other weed seeds. The operator shall notify the Authorized Officer 24 hours prior to seeding and shall provide seed tags and evidence of certification of the seed mix to the Authorized Officer within 30 days of completion of the seed application.

Upon completion of backfilling, leveling, ripping to a minimum 18 inch depth on 2 foot center, and recontouring, the stockpiled topsoil will be evenly spread over the reclaimed areas. Prior to reseeding, all disturbed surfaces will be scarified and left with a rough surface. No depressions will be left that would trap water and form ponds.

The prepared seedbed will be seeded within 24 hours after completing dirt work unless a change is requested by the operator and approved by the Authorized Officer. Prepare the seedbed by contour cultivating 4-6 inches deep to provide good seed/soil contact. Drill seed ¼ to ½ inch deep following the contour. In areas that cannot be drilled, broadcast seed at twice the application rate and cover ¼ to ½ inch deep with a harrow or drag bar. Fall seeding will be conducted after September 1 and prior to ground frost. Spring seeding will be done after the frost leaves the ground and no later than May 15<sup>th</sup>. If the seeding is unsuccessful, operator will be required to make subsequent seedings until the reclamation objectives identified in Appendix I, Surface Reclamation of the 6/98 GSFO's Draft Supplemental EIS for Oil & Gas Leasing Development are met.

#### Erosion Control Practices

The cut and fill slopes will be protected against rilling and erosion with measures such as water bars, lateral furrows, seeding or other measures approved by the Authorized Officer. Weed free straw bales, straw "wattles", straw matting or a well-anchored fabric silt fence will be used on cuts and fill slopes to protect against soil erosion.

#### Topsoil Practices

During well pad, road and/or pipeline construction, topsoil will be stripped to a minimum depth of 6 inches and segregated from other subsurface material piles, ie. excess material from reserve pit and pad construction. If topsoil is less than 6 inches, the top 6 inches of surface material will be stripped and

piled. Topsoil pile will be seeded with sterile grass or listed seed mix above within 72 hours after topsoil stripping is completed.

#### Site Protection Practices

Reclaimed areas will be fenced to exclude livestock until seeded species have established (only if livestock are grazed in this area). The Authorized Officer will approve the type of fencing. Fencing shall be to BLM standards.

The operator will submit an annual reclamation report by December 31 to the Authorized Officer. The report will document compliance with all aspects of the reclamation objectives. The report will specify if the reclamation objectives are likely to be achieved and actions needed to meet these objectives.

11. It will be the responsibility of the operator to comply with the Migratory Bird Treaty Act with respect to “take” of migratory bird species. As such, the operator is requested to prevent use by migratory birds of reserve pits, produced water pits, and evaporation pits, that store or are expected to store fluids which may pose a risk to such birds (e.g., migratory waterfowl, shorebirds, wading birds and raptors) during completion and after completion activities have ceased. Several established methods to prevent bird access are known to work. Methods may include but are not limited to netting, the use of bird-balls, or other alternative methods that effectively prevent bird access/use. Regardless of the method used, it will be applied within 24 hours after completion activities have begun. All lethal and non-lethal events that involve migratory birds will be reported to the Natural Resource Specialist immediately upon their discovery.

12. To minimize impacts to wintering big game on lands encumbered by leases not containing winter big game timing limitations, a 60-day Condition of Approval will be applied. As such, no well pad construction, drilling, or completion will be allowed from January 15 to March 15. This will reduce impacts to wintering big game in the area. **This COC 44963 lease contains a big game winter timing limitation in order to protect important seasonal wildlife habitat, exploration, drilling, and other development will be allowed only during the period from April 30 to January 15. This limitation does not apply to maintenance and operation of producing wells. Exceptions to this limitation in any particular year may be specifically approved by the appropriate Authorized Officer of the Bureau of Land Management.**

13. Raptors: If construction and drilling are planned to begin after February 1, 2007 but before May 15, 2007, then an up-to-date raptor survey will be required prior to commencement of work. If any active nests are found within ¼ mile of this well pad or associated road or pipelines, prior to May 15, no work will be allowed to commence from the time of occupation until all young have fledged and dispersed from the nest as documented by a qualified biologist.

14. A minimum of 2 feet of freeboard shall be maintained in the reserve pit. Freeboard is measured from the highest level of drilling fluids and cuttings in the reserve pit to the lowest surface elevation of ground at the reserve pit perimeter.

Notice: Check the lease for stipulations concerning Timing Limitations, No Surface Occupancy, and Controlled Surface Use.