

U.S. Department of the Interior
Bureau of Land Management
Glenwood Springs Field Office
2425 S. Grand Avenue, Suite 101
Glenwood Springs, CO 81601

ENVIRONMENTAL ASSESSMENT

NUMBER: CO-140-2007-036 EA

CASEFILE NUMBER: Federal Lease # COC-2799 (1955)

PROJECT NAME: Application for a Permit to Directionally Drill 5 Federal Wells from a Private Surface Location on Webster Mesa.

LOCATION: SW¼, Section 14, Township 6 South, Range 94 West, Sixth Principal Meridian.

LEGAL DESCRIPTIONS:

Table 1. Surface and Bottomhole Locations of Proposed Federal Wells		
<i>Proposed Wells</i>	<i>Surface Locations (Sec.14, T6 S, R94W)</i>	<i>Bottomhole Locations (Sec.14, T6S, R94W)</i>
Clough RWF 14-14	918 feet FSL x 354 feet FWL, SWSW	182 feet FSL x 610 feet FWL, SWSW
Clough RWF 24-14	911 feet FSL x 368 feet FWL, SWSW	240 feet FSL x 1511 feet FWL, SESW
Clough RWF 314-14	905 feet FSL x 382 feet FWL, SWSW	704 feet FSL x 861 feet FWL, SWSW
Clough RWF 324-14	924 feet FSL x 341 feet FWL, SWSW	1113 feet FSL x 1428 feet FWL, SESW
Clough RWF 414-14	930 feet FSL x 327 feet FWL, SWSW	1106 feet FSL x 568 feet FWL, SWSW

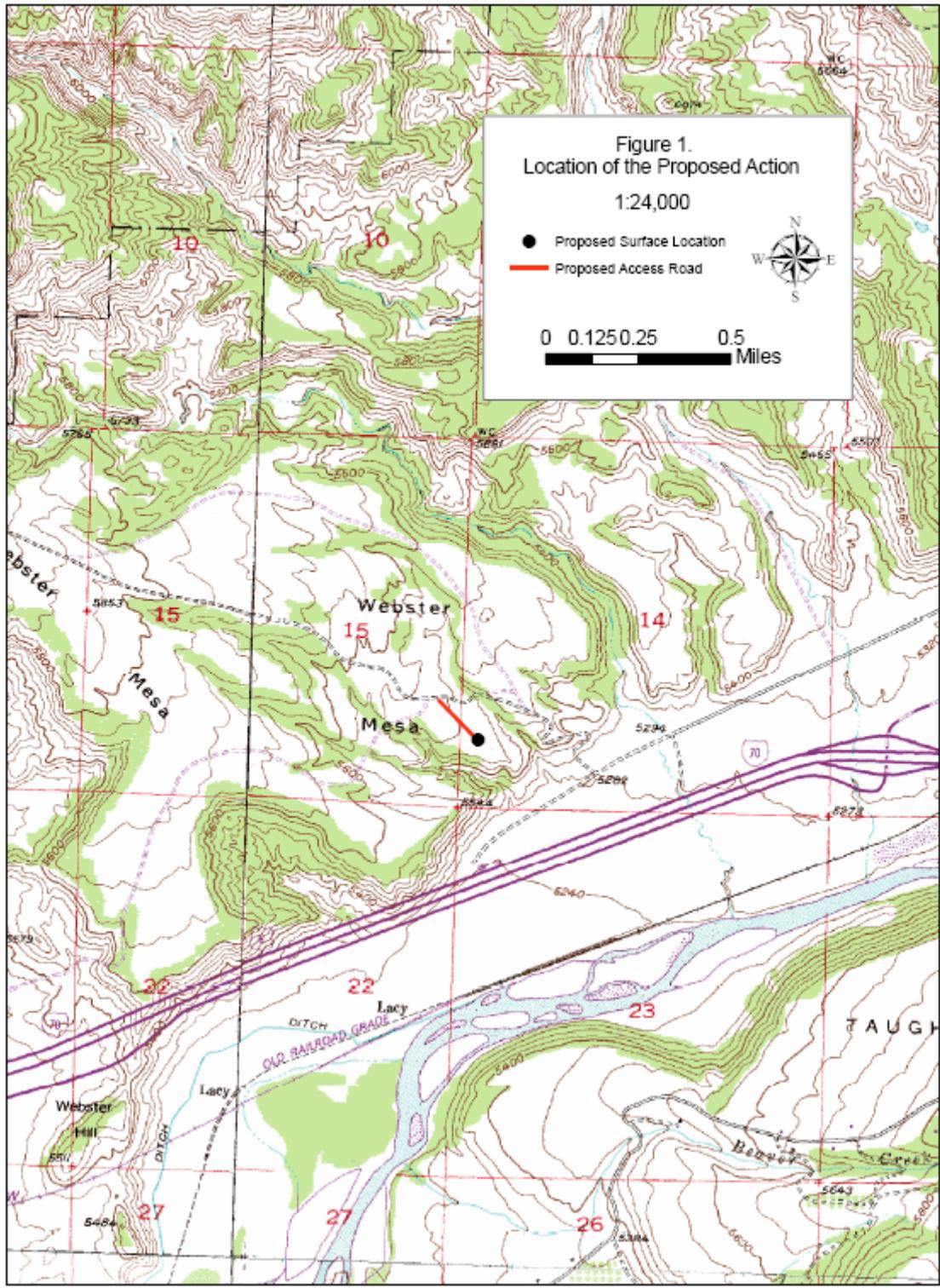
APPLICANT: Williams Production RMT Company (“Williams”)

DESCRIPTION OF THE PROPOSED ACTION AND NO ACTION ALTERNATIVE

Proposed Action: The proposed action is to drill and develop five Federal wells from one proposed pad located on private surface (Figure 1). These wells would be drilled from the private surface location using directional drilling equipment into underlying Federal mineral estate.

The proposed pad would be located on a gently sloping sagebrush flat with generally southern exposure overlooking the I-70 corridor. The pad would be 300 x 200 feet and its construction would disturb 2.21 acres. Maximum cut on the pad would be 8.7 feet and the maximum fill would be 10.3 feet.

Production equipment would be installed in a 50 x 150 foot area on the west side of the proposed pad. Preparation of this area would disturb 0.17 acres.



Approximately 1000 feet of new access road across private surface is also proposed. The area of disturbance associated with the proposed road would be 25 feet wide and the total disturbance would be approximately 0.6 acres. Gas and produced water flow lines would be buried along the proposed access road and connect to existing flow lines on private surface.

Total disturbance associated with the proposed action would be approximately 3 acres. The proposed action also includes drilling and completion operations, production of natural gas, and intermediate and final reclamation measures.

The Williams Master Application for Permit to Drill (APD) would be applicable to all proposed Federal wells. The Master APD includes a drilling program and a multi-point surface use and operations plan that describe further details of well pad construction and interim reclamation.

The proposed action would be implemented consistent with Federal oil and gas lease COC-2799, Federal regulations (43 CFR 3100), and the operational measures included in the APDs or attached to the APDs as Conditions of Approval (COAs). The COAs to be applied to this project are presented in Appendix A.

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. Although BLM cannot deny the right to drill and develop the leasehold, individual APD(s) can be denied to prevent unnecessary and undue degradation. The no action alternative constitutes denial of the APD(s) associated with the proposed action.

In accordance with Council on Environmental Quality (CEQ) regulations, the impacts of this alternative are evaluated to provide a base to compare impacts associated with the proposed action. For the purpose of the following comparative analysis, no development activities would occur under this alternative.

PURPOSE AND NEED FOR THE ACTION: The purpose of the action is to develop oil and gas resources on Federal Lease COC-2799 consistent with existing Federal lease rights. The action is needed to increase the development of oil and gas resources for commercial marketing to the public.

SUMMARY OF LEASE STIPULATIONS: Federal Lease COC-2799, issued in 1955, carries no special stipulations.

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 (BLM 1984).

Date Approved: Amended in November 1991 – Oil and Gas Leasing and Development - Final Supplemental Environmental Impact Statement; amended in March 1999 – Oil and Gas Leasing & Development Final Supplemental Environmental Impact Statement.

Decision Number/Page: Record of Decision, Glenwood Springs Resource Management Plan Amendment, November 1991, page 3.

Decision Language: “697,720 acres of BLM-administrated mineral estate within the Glenwood Springs Resource Area are open to oil and gas leasing and development, subject to lease terms and (as applicable) lease stipulations.” This decision was carried forward unchanged in the 1999 RMP amendment (BLM 1999a).

Discussion: The proposed action is in conformance with the 1991 and 1999 Oil and Gas RMP amendments because the Federal mineral estate proposed for development is open for oil and gas leasing and development.

STANDARDS FOR PUBLIC LAND HEALTH: In January 1997, Colorado 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 environmental analysis must address whether the proposed action or alternatives being analyzed would result in impacts that would maintain, improve, or deteriorate land health conditions relative to these resources. These analyses are presented in the applicable resource narratives below.

AFFECTED ENVIRONMENT AND ENVIRONMENTAL CONSEQUENCES

A variety of laws, regulations, and policy directives mandate the evaluation of the effects of a proposed action and alternative(s) on certain critical environmental elements. Not all of the critical elements that require inclusion in this EA are present, or if they are present, may not be affected by the proposed action and alternative (Table 2). Only those mandatory critical elements that are present and affected are described in the following narrative.

Table 2. Critical Elements of the Human Environment									
<i>Critical Element</i>	<i>Present</i>		<i>Affected</i>		<i>Critical Element</i>	<i>Present</i>		<i>Affected</i>	
	Yes	No	Yes	No		Yes	No	Yes	No
Air Quality	X		X		Prime or Unique Farmlands		X		X
ACECs		X		X	Special Status Species*	X		X	
Cultural Resources					Wastes, Hazardous or Solid	X		X	
Environmental Justice	X			X	Water Quality, Surface and Ground*	X			X
Floodplains		X		X	Wetlands and Riparian Zones*		X		X
Invasive, Non-native Species	X		X		Wild and Scenic Rivers		X		X
Migratory Birds	X		X		Wilderness/ WSAs		X		X
Native American Religious Concerns		X		X					

* Public Land Health Standard

In addition to the mandatory critical elements, there are additional resources that would be impacted by the proposed action and alternative. These are presented under **Other Affected Resources.**

Critical Elements

The following discussion presents critical elements of the human environment that are present and affected by the proposed action and/or no action alternative.

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.

Proposed Action:

Environmental Consequences: The Roan Plateau RMPA and EIS describes potential effects from oil and gas development (BLM 2006:4-26 to 4-37). Analysis was completed with regard to greenhouse gas emissions, a near-field and far-field analysis for carbon monoxide, particulate matter (PM₁₀ and PM_{2.5}), 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 Roan Plateau RMPA and EIS. Findings indicate that no adverse long-term effects would result under that plan. Since the proposed action is within the scope of the reasonable foreseeable development (RFD) scenario analyzed in that document, it is anticipated that the proposed action would be unlikely to have adverse effects on air quality.

Activities described in the proposed action would result in localized short-term increases in vehicle and equipment emissions. Concentrations of emissions would be below applicable ambient air quality standards as analyzed in the Roan Plateau RMPA & EIS. However, it is anticipated that construction and production activities would likely produce high levels of dust in dry conditions without dust abatement. To mitigate dust generated by these activities, the operator would be required to implement dust abatement strategies as needed by watering the access road and construction areas and/or by applying a surfactant approved by the Authorized Officer (Appendix A, Number 1).

No Action Alternative:

Environmental Consequences: The no action alternative would not result in additional emissions and would have no affect on air quality.

Cultural Resources

Affected Environment: A Class III cultural resource inventory (GSFO# 1107-3) was conducted of the area surrounding the proposed well pad location and the proposed access route. No properties were identified that are eligible for listing on the National Register of Historic Places. Therefore, no formal consultation with the Colorado State Historic Preservation Officer (SHPO) was necessary and a determination of “**No Historic Properties Affected**” was made in accordance with the National Historic Preservation Act (16U.S.C 470f), National BLM/SHPO Programmatic Agreement (1997), and Colorado Protocol (1998).

Proposed Action:

Environmental Consequences: Although there would be no direct impacts from the proposed action, 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. These impacts could range from illegal collection and excavation to vandalism.

A standard Education/Discovery Condition of Approval (COA) for cultural resource protection would be attached to the APDs (Appendix A, Number 2). The importance of this COA should be stressed to Williams and its contractors, including informing them of their responsibilities to protect and report any cultural resources encountered on public land during drilling and development operations.

No Action Alternative:

Environmental Consequences: Since no development activities would take place under this alternative, there would be no impact on cultural resources.

Invasive, Non-native Species

Affected Environment: The pad lies within a Wyoming big sagebrush community with scattered greasewood. Russian thistle occurs along the existing road and in the vicinity of the proposed access road. Cheatgrass is the prevalent understory species throughout the project area.

Proposed Action:

Environmental Consequences: Surface-disturbing activities create conditions favorable for the invasion and establishment of noxious weeds and other invasive non-native species, particularly when these species are already present in the surrounding area. Since cheatgrass and Russian-thistle are present in the vicinity of the proposed pad and access road, the potential for weed invasion following construction is extremely high. Mitigation measures designed to minimize the spread of invasive, non-native species are presented in Appendix A (Numbers 3 and 4).

No Action Alternative:

Environmental Consequences: Under the no action alternative, no drilling activities or pad or access road construction would take place; therefore, invasive, non-native species would not be affected.

Migratory Birds

Affected Environment: The pad, road, and pipeline are located on the edge of a small, sagebrush covered mesa. Widely scattered pinyon and juniper are found nearby. The area provides cover, forage, and nesting habitat for a variety of migratory birds. However, the habitat in the area is highly fragmented and few obligates of either sagebrush or pinyon-juniper are likely to occur.

There are no species included on the U. S. Fish and Wildlife Service Birds of Conservation Concern (BCC) (USFWS 2002) that are likely to breed in the vicinity of the pad. However, pinyon jays (*Gymnorhinus cyanocephalus*) were observed during surveys for this and two other nearby pads in late September 2006. Other more common migratory birds may use the area for nesting and foraging.

No raptor nests are known to occur in the immediate vicinity of the proposed well pad, road, or pipeline. However, golden eagles and red-tailed hawks are known to nest in the area. In 2006, an active red-tailed hawk nest was discovered approximately 0.45 miles from the proposed pad.

Proposed Action:

Environmental Consequences:

The proposed action would involve the initial removal of approximately 3 acres of Wyoming sagebrush vegetation and would result in a loss of nesting, breeding, perching, and foraging habitat for migratory birds. The loss of vegetation would result in further fragmentation of the local habitat, leading to additional reductions in habitat patch size. Species most sensitive to fragmentation would likely avoid the area. Portions of the disturbed acreage would be reclaimed which would reduce long-term habitat loss.

If the removal of vegetation occurs during the March 15th to August 15th nesting period, direct take of active nests could occur. Indirect take of nearby nests could also occur as a result of disturbance. Reactions to disturbance can vary, from subtle physiological changes undetectable to human observers to aggressive defensive behavior. Disturbance may cause some birds to spend less time at the nest, leaving the chicks vulnerable to overheating, chilling, predation, or starvation.

The development of reserve pits in the project area may be expected to attract waterfowl and other migratory birds for purposes of resting, foraging, or as a source of free water. The extent and nature of the problem is not well-defined, but management measures must be conservative and relegated to preventing bird contact with produced water and drilling and completion fluids that may pose a problem (e.g., acute or chronic toxicity, compromised insulation) (Appendix A, Number 5).

Based on distance, vegetation, and topography, it is unlikely that the known raptor nest would be affected by the proposed project activities. Therefore, no conservation measures in relation to this nest are recommended. However, data on the distribution of raptor nests in the area are incomplete, and a COA is included that would require a raptor nest survey in the vicinity if construction activities would commence between February 1st and August 15th. If an active nest is located within 0.25 mile of the proposed activity, a timing limitation (TL) would be imposed. Under the TL, no construction activities could occur for a 60-day period beginning on the date the nest was found to be active or until August 15th which ever comes first (Appendix A, Number 6). Upland foraging habitat for raptors is abundant in the area and the proposed action should not have an effect on raptor foraging behavior.

Nesting habitat for pinyon jays is not present near the project area and, therefore, the proposed action would not affect nesting behavior. Flocks of foraging jays may avoid the area temporarily during construction as a result of noise and human activity, but are unlikely to be negatively affected because of the abundance of preferred foraging habitat in the area.

No Action Alternative:

Environmental Consequences: Under the no action alternative, natural gas development would not occur and the local habitat would not be further fragmented. Disturbance-related effects to birds would not occur, and there would be no potential for “take” under the Migratory Bird

Treaty Act.

Native American Religious Concerns

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

Proposed Action:

Environmental Consequences: Indirect impacts from increased access and personnel could result in a range of impacts to unknown cultural resources. These could range from illegal collection to vandalism. A standard Education/Discovery COA for cultural resource protection would be attached to the APDs (Appendix A, Number 2). The importance of this COA should be stressed to Williams and its contractors, including informing them of their responsibilities to protect and report any cultural resources encountered on public land during drilling and development operations

No Action Alternative:

Environmental Consequences: Since no development activities would take place under this alternative, there would be no impact on resources of Native American Religious Concern.

Special Status Species (includes analysis on Standard 4)

Affected Environment: According to the latest species list from the U.S. Fish and Wildlife Service (USFWS 2002), the following Federally listed or candidate threatened or endangered species may occur within or be impacted by actions occurring in Garfield County: lynx (*Lynx lynx*), black-footed ferret (*Mustela nigripes*), bald eagle (*Haliaeetus leucocephalus*), Mexican spotted owl (*Strix occidentalis lucida*), western yellow-billed cuckoo (*Coccyzus americanus occidentalis*), razorback sucker (*Xyrauchen texanus*), Colorado pikeminnow (*Ptychocheilus lucius*), bonytail chub (*Gila elegans*), humpback chub (*Gila cypha*), Uinta Basin hookless cactus (*Sclerocactus glaucus*), Parachute beardtongue (*Penstemon debilis*), and DeBeque phacelia (*Phacelia submutica*).

A field visit to assess suitable habitat for special status plant and wildlife species was conducted on January 11, 2007, by the BLM Energy Office ecologist and wildlife biologist. The Wyoming big sagebrush community does not provide suitable habitat for any special status plant species found within the area administered by the Glenwood Springs Field Office.

Of the Federally listed, proposed, or candidate threatened or endangered wildlife species listed above, habitat is present near the project area for the threatened bald eagle and two endangered fishes, the Colorado pikeminnow and razorback sucker. Winter habitat and potential nesting habitat for the bald eagle is present in the Colorado River corridor, while the Colorado River and 100-year floodplain are Designated Critical Habitat for the two endangered fishes.

BLM sensitive wildlife species with habitat and/or occurrence records in the area include the milk snake (*Lampropeltis triangulum taylori*), midget faded rattlesnake (*Crotalus viridis concolor*), Great Basin spadefoot toad (*Spea intermontana*), flannelmouth sucker (*Catostomus latipinnis*), bluehead sucker (*Catostomus discobolus*), and roundtail chub (*Gila robusta*). The milk snake is

potentially present in riparian and floodplain habitats, the midget faded rattlesnake is potentially present in rocky uplands, and the Great Basin spadefoot is potentially present within or near seasonal surface waters. The three native fish species are known to inhabit the Colorado River near the project area.

Proposed Action:

Environmental Consequences: Since special status plants or suitable habitat are not present in the project vicinity, the proposed action would have no impact on these species.

The pad, road, and pipeline are located more than 0.5 mile from bald eagle winter and nesting habitat. Therefore, it has been determined that the proposed developments associated with this action would have “**No Effect**” on bald eagles.

The proposed action would occur in habitats of the milk snake, the midget faded rattlesnake, and the Great Basin spadefoot (toad). Direct effects on these species could include injury or mortality as a result of construction, production, and maintenance activities. These effects would be most likely during the active season for these species, which are April to October for the milk snake, March to October for the midget faded rattlesnake, and May through September for the Great Basin spadefoot. Indirect effects for the milk snake and midget faded rattlesnake could include a greater susceptibility to predation if the road or pad is used for sunning.

Construction of the road and pad would increase the potential for soil erosion and sedimentation. Although a minor, temporary increase in sediment transport to the Colorado River may occur, it is not likely that the increase would be detectable above current background levels. In any case, all of the special status fish species associated the Colorado River are adapted to naturally high sediment loads. Therefore, the proposed action would have “**No Effect**” on the Colorado pikeminnow or razorback sucker.

Since the flannelmouth sucker, bluehead sucker, and roundtail chub have similar habitat requirements and are similarly adapted to high sediment loads, the proposed action would also not be expected to adversely affect these special status species. Mitigation measures presented in Appendix A (Numbers 3 and 7) would be implemented to minimize sedimentation.

No Action Alternative:

Environmental Consequences: Under the no action alternative, natural gas development would not occur and no impacts to special status species are anticipated.

Analysis on the Public Land Health Standard for Special Status Species: According to a recent land health assessment, habitat conditions within this watershed appear suitable for special status animal species known or likely to occur there (BLM 2005). However, large portions of the landscape are being fragmented due to extensive natural gas development. Continued habitat fragmentation is of concern, because large blocks of contiguous intact habitat are required by many species. Sustained development and the proliferation of roads, well pads, pipelines, compressor stations, tank farms, and other surface facilities will continue to reduce habitat patch size and affect both habitat quality and quantity. The potential to impact some species would increase as development continues. The proposed action in conjunction with similar activities throughout this watershed would increase fragmentation and could increase sediment loads. Although the contribution of the proposed action would be minimal, it may further trend the area away from meeting Standard 4 for special status wildlife.

Since potential habitat for special status plant species is not present in the project area and no offsite or indirect impacts are anticipated, the proposed action should have no effect on these species. The proposed action should not result in a failure of the area to achieve Standard 4 for special status plants.

The no action alternative would not result in a failure of the area to achieve Standard 4 for special status animal species, because the habitat fragmentation and potential increases in sediment loads associated with development activities would not occur.

Wastes, Hazardous or Solid

Affected Environment: Hazardous materials are defined by the BLM as any substance, pollutant, or contaminant that is listed as hazardous under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) of 1980, as amended, 42 USC 9601 et seq., and its regulations. The definition of hazardous substances under CERCLA includes any “hazardous waste” as defined in the Resource Conservation and Recovery Act (RCRA) of 1976, as amended, 42 USC 9601 et seq., and its regulations. The term does not include petroleum, including crude oil or any fraction thereof that is not otherwise specifically listed or designated as a hazardous substance under CERCLA Section 101(14), 42 USC 9601 (14), nor does the term include natural gas. No hazardous or solid wastes are known to be present in the project area, and no hazardous materials are known to have been used, stored, or disposed onsite.

Proposed Action:

Environmental Consequences: A variety of materials, including lubricants, treatment chemicals, gasoline, oil, and diesel fuel, would be used in the development activities. Potentially harmful substances used in the construction and operation would be kept onsite in limited quantities and trucked to and from the site as required.

Most waste generated would be exempt from hazardous waste regulations under the exploration and production exemption of the RCRA. Examples of exempt wastes include process water and soils contaminated with hydrocarbons. No hazardous substance, as defined by 40 CFR 355 would be used, produced, stored, transported, or disposed in amounts above the threshold quantities.

No Action Alternative:

Environmental Consequences: Under the no action alternative, no development activities would occur and no potentially hazardous substances associated with development would be present in the area.

Water Quality, Surface and Ground (includes analysis on Standard 5)

Surface Water

Affected Environment: The proposed well pad and access road would be located within a 24,411 unnamed sub-watershed located north of I-70 and the Colorado River and between the Town of Parachute and the City of Rifle. There are no drainages within the project area and no drainages of significance are located nearby.

Proposed Action:

Environmental Consequences: 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 nearby drainages would be minimized. The mitigation measures presented in Appendix A (Numbers 3 and 7) would be implemented to protect surface water.

No Action Alternative:

Environmental Consequences: The no action alternative would not result in additional sediment available for transport and would have no affect on surface water quality.

Groundwater

Affected Environment: The surface formation is the Wasatch Formation. Water wells in the area are relatively shallow. The proposed well surface casing depths are adequate to protect the water wells from possible contamination from downhole fluids or from drilling fluids. The top of cement in the production casing annular space must be 200 feet about the top of the Mesaverde Group for all Federal wells. The 10-point drilling plans are adequate to protect downhole resources.

Proposed Action:

Environmental Consequences: With the use the construction and drilling practices presented in the 10-point drilling plans, no impacts to groundwater aquifers and quality are anticipated. A geologic and engineering review was performed on the 10-point drilling plans to ensure that the cementing and casing programs adequately protect the downhole resources.

No Action Alternative:

Environmental Consequences: Under the no action alternative no development activities would occur and there would be no impact on ground water quality or quantity.

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.

Since no development activities would occur, the No Action alternative would not prevent standard 5 from being met.

Other Affected Resources

In addition to the critical elements, the following resources would be affected by the proposed action and/or no action alternative: Access and transportation, geology and minerals, noise, paleontology, soils, vegetation, visual resources, and aquatic and terrestrial wildlife.

Access and Transportation

Affected Environment: Access to the proposed well pad originates on privately owned lands with no legal public access. Traffic in this area is currently very light.

Proposed Action:

Environmental Consequences: The proposed action would result in a substantial increase in truck traffic. Truck traffic would be heaviest during rig-up, completion activities, and the rig-move to the next location. Once the wells are producing, traffic would decrease and would be relegated to occasional visits for monitoring or maintenance activities.

No Action Alternative:

Environmental Consequences: This alternative would not have an impact on access or transportation, because the development activities would not occur.

Geology and Minerals

Affected Environment: The proposed action would consist of drilling 5 wells from one proposed surface location. These wells would penetrate the Wasatch, Williams Fork and Iles Formations. In these wells, conventional sands would be explored for possible economic gas recovery in the Mesaverde Group. The casing and cementing programs are adequate to protect downhole resources. Coals with approximately 6,000 feet of overburden can be found in the lower Williams Fork Formation for wells drilled from all three well pads. The current value of these coals as a mineable resource is low. Nonetheless, the identified seams would be isolated by the proposed casing and cementing program.

Proposed Action:

Environmental Consequences: All coal seams and fresh water zones would be protected with casing and cement behind pipe. Therefore, the proposed action would have no impact on geology and minerals. Downhole COAs are presented in Appendix B.

No Action Alternative:

Environmental Consequences: This alternative would have no impact on geology and minerals because the development activities would not occur.

Noise

Affected Environment: The proposed wells would be located approximately 5 miles west of the City of Rifle and 10 miles east of the Town of Parachute. Noise in this area is presently created by natural gas development such as drilling and completion activities and associated truck traffic. Traffic associated with travel on I-70 also contributes to noise levels.

Proposed Action:

Environmental Consequences: The construction, drilling, and completion activities would result in temporary increases in noise levels. The increased noise would be most noticeable along the roads used to haul equipment and at the well pad. It is unlikely that this noise would be heard from Rifle or Parachute due to their distance from the proposed development area.

No Action Alternative:

Environmental Consequences: Since there would be no development under this alternative, there would be no noise.

Paleontology

Affected Environment: Surficial geology consists of the Wasatch Formation of Paleocene age, overlain by gravels and alluvium of Pinedale and Bull Lake age. The Wasatch is a Class 1 formation, with areas known or likely to produce abundant scientifically important fossils vulnerable to surface-disturbing activities. The Wasatch Formation may contain early horses, rare primates, rhinoceroses, birds, crocodiles, rodents, fish, turtles, freshwater clams, snails, and plants.

Proposed Action:

Environmental Consequences: No paleontological sites have been identified near the project area. Since the proposed action would involve relatively minor disturbances of gravel and alluvium, no new surveys would be required. The standard paleontological condition of approval would be applied to the APDs (Appendix A, Number 8).

No Action Alternative:

Environmental Consequences: Since there would be no development activities under this alternative, there would be no impact on paleontological resources.

Soils (includes analysis on Standard 1)

Affected Environment: The proposed well pad and new access road would be located on the soil map unit Potts loam (USDA, 1985). This deep, well-drained soil is found on mesas, benches, and the sides of valleys at elevations ranging from 5,000 to 7,000 feet and on slopes of 6 to 12 percent. Parent material for this soil includes sandstone, shale, and basalt. Surface runoff for this soil is medium and the erosion hazard is severe. Primary uses for this soil include grazing, wildlife habitat, and dryland farming.

Proposed Action:

Environmental Consequences: Some soil loss, loss of soil productivity, and increase in sediment available for transport would result from construction activities. Due to the severe erosion hazard of area soils, mitigation measures would be implemented to minimize potential impacts associated with soil loss and transport (Appendix A, Numbers 3 and 7).

No Action Alternative:

Environmental Consequences: The no action alternative would not result in additional soil loss and would have no affect on soil resources.

Analysis on the Public Land Health Standard for Upland Soils: Neither the proposed action or no action alternative would not likely prevent standard 1 from being achieved.

Vegetation (includes analysis on Standard 3)

Affected Environment: The pad lies within a Wyoming big sagebrush community with scattered greasewood. Cheatgrass is the dominant understory species. Native grasses such as alkali sacaton, Sandberg's bluegrass and galleta grass are also present.

Proposed Action:

Environmental Consequences: The proposed developments would result in approximately 3 acres of new ground disturbance. In order to accommodate access to the wells (if production occurs), about half of the disturbance would not be reclaimed during the life of the wells. With implementation of reclamation practices identified in Appendix A (Number 3), establishment of desirable herbaceous vegetation on the unused portions of the pad, pipeline and road could be restored within 2 to 3 years. The establishment of mature shrubs could take from 5 to 25 years. However, because of periodic workovers and the potential for additional well bores in the future, it is likely that vegetation would remain in an early seral stage for the life of the wells.

No Action Alternative:

Environmental Consequences: Under the no action alternative, no drilling activities or pad or access road construction would take place; therefore, there would be no impacts to vegetation.

Analysis on the Public Land Health Standard for Plant and Animal Communities (partial, see also **Wildlife, Aquatic and Wildlife, Terrestrial**): Problems related to plants in The Rifle West Land Health Assessment included the widespread invasion of cheatgrass with a corresponding loss of other functional groups such as perennial native grasses and forbs. Also, sagebrush communities were dominated by old, decadent sagebrush with poor recruitment. The surface disturbance associated with the proposed action has the potential to encourage expansion and dominance of the site by cheatgrass. Appendix A includes provisions to revegetate the disturbances with native vegetation and to control noxious weeds. If successfully revegetated, the proposed action may result in a localized improvement in vegetative conditions by improving the density, frequency and composition of native plant species.

The no action alternative would have no bearing on the ability of the area to meet the public land health standard for plant and animal communities.

Visual Resources

Affected Environment: The proposed pad and access road is located on private lands within an area classified as VRM Class IV (BLM 1984). The objective of this class is to provide for management activities which require major modifications of the existing character of the landscape. The level of change to the characteristic landscape can be high. These management activities may dominate the view and be the major focus of viewer attention. However, every attempt should be made to minimize the impact of these activities through careful location, minimal disturbance, and repeating the basic elements.

Visual resource management objectives do not apply to non-BLM lands, but visual concerns may be addressed on split estate where Federal minerals occur. 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. Current landscape character is best described as rural plateaus and canyons that are fragmented from roads, pipelines, and well pads. The landscape is moving to a more industrialized setting.

The protection of VRM classes, landscape character and scenic quality on private and public lands and split estate is discussed in the FSEIS (BLM 1999b:3-41 to 3-45). The impacts of development are also described (BLM 1999b:4-49-54). The proposed action would not directly affect any of the key viewing areas or viewsheds described in the FSEIS, although the project area lies within background viewing area of the I-70 corridor. Portions of the new access road would be seen from I-70.

Proposed Action:

Environmental Consequences: The construction of the pad and the access road would create contrast within the existing landscape by removing the existing vegetation and exposing bare ground. The access road would produce the greatest visual contrasts to color, line, form, and texture. Interim reclamation of the well pad and cut of fills along the access road with seeded shrub and grass species would reduce some of the contrast after two to three growing seasons. Additional reductions in contrast would be realized by painting production facilities the non-reflective natural color, 10 yr 6/3 Desert Tan. With these mitigation measures, long-term visual impacts would be reduced and the proposal would meet VRM Class IV objectives (Appendix A, Numbers 3 and 8).

No Action Alternative:

Environmental Consequences Under the no action alternative, no drilling activities or pad or access road construction would take place. Additional contrasts within the existing landscape would not occur and VRM Class IV objectives would be maintained.

Wildlife, Aquatic (includes analysis on Standard 3)

Affected Environment: The well pad is to be placed between two small ephemeral drainages that feed the Colorado River approximately 1 mile to the south. In addition to the special status fish already addressed, the Colorado River contains a variety of other fishes, including trout, and a variety of aquatic insects.

Proposed Action:

Environmental Consequences: Proposed development activities would increase site-specific erosion and sedimentation due to soil exposure. This increase would persist until such time as adequate vegetation establishment is obtained on reclaimed portions of disturbed areas. New roads would increase the long-term risk of erosion and sedimentation indefinitely. Sediment intolerant fish species such as trout can be negatively impacted due to silting in of important spawning substrates which reduces egg survival due to reduced oxygen and reduced water quality.

In addition, aquatic insect productivity and diversity may decline due to water quality changes and silting in of interstitial stream substrates. This negatively affects aquatic insects directly while indirectly influencing important food sources for resident fishes. The small amount of sediment anticipated from the proposed action that ultimately reaches the Colorado River should have minimal impact on fisheries, because sediment levels are projected to be well within the background levels for the Colorado River. Minor increases in sediment produced from the action would be undetectable. However, as similar natural gas activity continues within the Colorado River basin from roughly New Castle, Colorado to the west, increases in sediment may have a greater impact on sediment intolerant aquatic species. To minimize impacts to downstream fishes and aquatic insects, the mitigation measures presented in Appendix A (Numbers 3 and 7) are recommended.

No Action Alternative:

Environmental Consequences: Since natural gas development would not occur, no impacts to aquatic wildlife are anticipated.

Analysis on the Public Land Health Standard 3 for Plant and Animal Communities (partial, see also **Vegetation and Wildlife, Terrestrial**): The proposed action and no action alternative should result in minimal impacts to aquatic wildlife and would have little bearing on the ability to maintain or meet Standard 3 for aquatic wildlife.

Wildlife, Terrestrial (includes analysis on Standard 3)

Affected Environment: The pad, road, and pipeline are located on the edge of a small, sagebrush covered mesa. Scattered pinyon and juniper are found nearby. The area around the pads provide cover, forage, and nesting habitat for a variety of big game and small game, as well as nongame mammals, birds, and reptiles. The pad, road, and pipeline location would be within mule deer winter range and severe winter range. The project area does not carry those designations for elk but is within a half mile of elk winter range south of the Colorado River (CDOW 2001).

Proposed Action:

Environmental Consequences: Short-term, long-term, and cumulative impacts to terrestrial wildlife from natural gas development were analyzed in the FSEIS (BLM 1999b). These impacts include, but are not limited to, displacement into less suitable habitat, increased stress, and habitat loss. These impacts are more significant during critical seasons, such as winter or during reproduction.

The proposed action would result in a minor increase in the direct loss of terrestrial wildlife habitat, while a larger area would be indirectly affected. Indirect habitat losses may occur if increased human activity (e.g., traffic, noise) associated with infrastructure cause mule deer to be displaced or alter their habitat use patterns. Similar effects could be expected for elk.

The surface location of proposed developments is on private land and the lease under which minerals rights are held (COC-2799) does not contain a big game winter timing limitation. Because Federal wells would be developed from this surface location, the BLM would impose a 60-day timing limitation in order to protect wintering big game. The timing limitation, which would be included as a COA on the 5 APDs, would prohibit development activities from February 1st to April 1st (Appendix A, Number 9).

No Action Alternative:

Environmental Consequences: Since natural gas development would not occur, no impacts to terrestrial wildlife are anticipated.

Analysis on the Public Land Health Standard for plant and animal communities (partial, see also **Vegetation and Wildlife, Aquatic**): The Rifle West Land Health Assessment found that 38,373-acres of land within the Rifle West watershed were not meeting Standard 3 for some wildlife species, most notably mule deer. Of this acreage, 12,549-acres are located on BLM land. The main problem with the watershed is large-scale habitat fragmentation due primarily to natural gas exploration and development. This physical loss of habitat is a problem with regard to the loss of forage and cover, and is exacerbated when combined with increasing human use of the area.

Other factors contributing to the failure to achieve Standard 3 for wildlife include: the encroachment of juniper into sagebrush habitats, a lack of forb production, poor condition of

sagebrush, and poor understory conditions. Some individual sagebrush stands are hedged and some stands are decadent with poor age class diversity and limited regeneration or recruitment.

The proposed action would result in direct and indirect losses of habitat, further fragmentation of remaining habitats, and increased human use in the area. Given the level of activity in the greater area, the proposed action may further trend the watershed away from meeting Standard 3 for some terrestrial wildlife species.

The no action alternative would have no bearing on Standard 3 for terrestrial wildlife species.

CUMULATIVE IMPACTS SUMMARY:

The Draft and Final Roan Plateau Resource Management Plan Amendment & Environmental Impact Statements (BLM 2004, 2006) collectively analyzed six 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 upward to 1,582 new wells on public lands within the planning area and 3,019 new wells on both public and private lands. These numbers are in addition to comparable levels of oil and gas development within western Garfield County but outside the Roan Plateau area.

The proposed action is representative of recent advances in drilling technology that are reducing the cumulative impact levels described in the Draft Roan Plateau RMP Amendment and EIS. Specifically, greater use of directional drilling, being pursued most intensively by Williams, has allowed up to 22 wells per pad instead of the more typical number of two to four at the time the Draft Roan Plateau RMP Amendment and EIS and the earlier Oil and Gas Leasing & Development Final Supplemental EIS were prepared in November 2004 and March 1999, respectively. This advancement has reduced the number of pads that need to be constructed and allowed BLM to undertake a management direction emphasizing phased and clustered development, unitization, centralization of surface facilities, limits on unclaimed disturbance, and restrictions or prohibitions on the development of sensitive areas and key resources. Since the Proposed Roan Plateau RMP Amendment and EIS presents a recent analysis of cumulative impacts in an area encompassing the proposed action, it is incorporated by reference.

As an example of the reduction in cumulative impacts associated with the greater use of clustered directional drilling, the Proposed Plan presented in the Final Roan Plateau RMP Amendment and EIS of August 2006 estimated 812 acres of long-term disturbance from 1,570 new wells on 193 new pads. In comparison, the maximum development scenario presented in the Draft plan of November 2004 estimated 2,495 acres of long-term disturbance from 1,582 new wells but 584 pads.

Although none of the cumulative impacts described in the Final Roan Plateau RMP Amendment and EIS was characterized as significant, and while new technologies have reduced the amount of direct habitat loss required per given number of new wells, it nonetheless is clear that past, present, and reasonably foreseeable future oil and gas development has had and would continue to adversely affect various elements of the human environment. The anticipated impact levels for existing and future development range from negligible to locally major, and primarily negative, for specific resources. The primary reasons for this assessment are twofold: (1) the past, present, and future rate of oil and gas development in the Roan Plateau area has far exceeded the rate of abandonment and reclamation, resulting in an accumulation of individually nominal effects; and (2) the majority of oil and gas development in the area has occurred, and is likely to continue to occur, on private holdings where leases stipulations, mitigation measures applied as conditions of approval, and development scenarios designed to protect and conserve resources are not in effect.

The proposed action is anticipated to contribute negligibly to the collective impact, due to the small-scale of the project and the mitigation measures represented by the conditions of approval identified in Appendices A and B.

PERSONS AND AGENCIES CONSULTED:

Williams Production RMT Company

INTERDISCIPLINARY REVIEW:

<u>Name</u>	<u>Title</u>	<u>Area of Responsibility</u>
Bill Barter	Natural Resource Specialist	Team Leader
Mark Ennes	Planning and Environmental Coordinator	NEPA compliance
John Brogan	Archaeologist	Cultural Resources, Native American Religious Concerns
Jeff Cook	Wildlife Biologist	Terrestrial Wildlife, Aquatic Wildlife, Migratory Birds, Special Status Species (wildlife)
Beth Brenneman	Ecologist	Special Status Species (plants), Vegetation, Invasive Non-native Species
Fred Conrath	Geologist	Ground Water, Geology and Minerals
Harley Armstrong	Paleontologist	Paleontology
Marty O'Mara	Petroleum Engineer	Downhole Conditions of Approval
Kay Hopkins	Outdoor Recreation Planner	Visual Resources, ACEC, WSR,
Jeff O'Connell	Hydrologist	Air Quality, Surface Water, Soils
Isaac Pittman	Rangeland Management Specialist	Range

REFERENCES:

Bureau of Land Management (BLM)

- 1984. *Glenwood Springs Resource Management Plan*. Glenwood Springs Field Office.
- 1991. *Record of Decision, Oil and Gas Plan Amendment to the Glenwood Springs Resource Management Plan*. Glenwood Springs Field Office.
- 1999a. *Oil and Gas Leasing and Development – Record of Decision and Resource Management Plan Amendment*. Glenwood Springs Field Office.
- 1999b. *Oil and Gas Leasing and Development – Final Supplemental Environmental Impact Statement*. Glenwood Springs Resource Area. Glenwood Spring Field Office.
- 2004. *Draft Roan Plateau Planning Area Resource Management Plan Amendment and Environmental Impact Statement*. Glenwood Springs Field Office.
- 2005. *Rifle-West Watershed Land Health Assessment*. Glenwood Springs Field Office.

2006. *Final Roan Plateau Planning Area Resource Management Plan Amendment and Environmental Impact Statement*. Glenwood Springs Field Office.

Colorado Division of Wildlife (CDOW)

2001. Elk and mule deer GIS data.

2005. Colorado Species Distribution – Bald Eagle. Seasonal Activity Area Definitions. Fort Collins, CO 80526

U.S. Department of Agriculture (USDA)

1985. *Soil Survey of Rifle Area, Colorado: Parts of Garfield and Mesa Counties*. Soil Conservation Service [Natural Resources Conservation Service].

U.S. Fish and Wildlife Service (USFWS)

2002. Birds of conservation concern. Division of Migratory Bird Management, Arlington, Virginia. 99 pp. [Online version available at <http://migratorybirds.fws.gov/reports/bcc2002.pdf>]

FONSI
CO140-2007-036 EA

The environmental assessment analyzing the environmental effects of the proposed action has been reviewed. The 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 Applications for Permit to Drill (APDs) for the five Federal wells (RWF 14-14, RWF 24-14, RWF 314-14, RWF 324-14, and RWF 414-14) and associated developments proposed for the proposed private surface location, RWF 14-14 with the Conditions of Approval (COAs) identified in Appendices A and B. This decision will 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 attached Conditions of Approval.

MITIGATION MEASURES: Mitigation measures presented in Appendices A and B will be incorporated as Conditions of Approval for both surface and drilling operations.

NAME OF PREPARER: Bill Barter, Natural Resource Specialist

SIGNATURE OF PLANNING AND ENVIRONMENTAL COORDINATOR:



Planning and Environmental Coordinator

1/22/07
Date

SIGNATURE OF AUTHORIZED OFFICIAL:



Authorized Officer

1-22-07
Date

APPENDIX A
SURFACE USE CONDITIONS OF APPROVAL

CO-140-2007-036 EA

SURFACE USE CONDITIONS OF APPROVAL

Proposed RWF 14-14 location:

New wells: RWF 14-14, RWF 24-14, RWF 314-14, RWF 324-14, RWF 414-14

1. Dust Abatement. The operator shall implement 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.
2. Cultural 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 43 CFR 10.4(g), the 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 43 CFR 10.4 (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 ruins 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 Authorized Officer of the findings (16 USC 470h-3, 36 CFR 800.112). 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;
- what mitigation measures the holder will likely have to undertake before the site can be used (assuming *in situ* preservation is not necessary); and
- the timeframe for the Authorized Officer to complete an expedited review under 36 CFR 800.11, or any agreements in lieu thereof, to confirm through the SHPO 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 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 relocation and/or to conduct 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 ruins, prehistoric ruins, and other cultural or paleontological objects of scientific interest that are outside the authorization boundaries but potentially affected, either directly or indirectly, by the proposed action will also be included in this evaluation or mitigation. Impacts that occur to such resources as a result of the authorized activities will be mitigated at the proponent's cost, including the cost of consultation with Native American groups.

Any person who, without a permit, injures, destroys, excavates, appropriates or removes any historic or prehistoric ruin, artifact, object of antiquity, Native American remains, Native American cultural item or archaeological resources on public lands is subject to arrest and penalty of law (16 USC 433, 16 USC 470, 18 USC 641, 18 USC 1170, and 18 USC 1361).

3. Reclamation. Refer to Appendix I (Surface Reclamation) of the 1998 Draft Supplemental EIS (DSEIS) for specific reclamation goals, objectives, timelines, measures, and monitoring methods. These guidelines should be followed in completing the reclamation of disturbed surfaces on well pads, access roads, and pipelines. The four Reclamation Categories defined in Appendix I of the 1998 DSEIS should be used to assess the progress of reclamation monitoring.

a. Seedbed Preparation. All slopes will be reshaped to 3:1 or flatter prior to seedbed preparation. Initial seedbed preparation shall consist of backfilling, leveling, and ripping all areas to be seeded to a minimum depth of 18 inches with a furrow spacing of 2 feet, followed by recontouring the surface and then spreading the stockpiled topsoil evenly. Prior to seeding, the seedbed shall be scarified and left with a rough surface. No depressions shall be left that would trap water and form ponds. Final seedbed preparation shall consist of contour cultivating to a depth of 4 to 6 inches within 24 hours prior to seeding.

b. Seed Application. Seeding shall be conducted no more than 24 hours following completion of final seedbed preparation. A certified weed-free seed mix designed by BLM to meet interim reclamation standards is recommended; however, because the well pad is located on private surface, the private landowner would ultimately determine the seed mix to be used for reclamation. Revegetating the area will help prevent erosion and establishment of weeds and provide food and cover for wildlife. The following seed mix is recommended for use on all disturbed surfaces within the project area:

<i>Common Name</i>	<i>Variety</i>	<i>Percent</i>	<i>PLS lbs/acre</i>
Fourwing Saltbush	Rincon	7	3.7
Shadscale Saltbush		7	2.0
Wyoming Sagebrush	Hobble Creek	6	0.05
Western Wheatgrass	Arriba	18	3.0
Sandberg Bluegrass		19	0.4
Galleta	Viva florets	15	1.8
Alkali Sacaton	Salado	18	0.2
Scarlet Globemallow		10	0.4
Total		100	11.55

The application rate shown in the table is based on 45 pure live seeds (PLS) per square foot, drill-seeded to a depth of 0.25 to 0.5 inch, which is the method that shall be used where feasible. In areas that cannot be drill-seeded, the mix shall be broadcast-seeded at twice the application rate shown in the table and covered 0.25 to 0.5 inch deep with a harrow or drag bar.

Fall seeding shall be conducted after September 1 and prior to ground frost. Spring seeding shall be conducted after the frost leaves the ground and no later than May 15. If the seeding is unsuccessful, the operator shall make subsequent seedings until the reclamation objectives identified in Appendix I (Surface Reclamation) of the 1998 DSEIS are met.

Note: Because cheatgrass is already abundant in the project vicinity, it may not be feasible to completely eliminate this invasive species from the project area. Therefore, if the area adjacent to the project site contains less than a 50-percent cover of cheatgrass, interim reclamation will be considered acceptable when the cover of cheatgrass on the project site does not exceed 5 percent. If the area adjacent to the project site contains more than a 50-percent cover of cheatgrass, interim reclamation will be considered acceptable when the cover of cheatgrass on the project site does not exceed 50 percent.

- c. Erosion Control. Cut-and-fill slopes shall be protected against erosion with the use of water bars, lateral furrows, or other measures approved by the Authorized Officer. Weed-free straw bales, straw “wattles,” straw matting, or a well-anchored fabric silt fence shall be used on cuts and fill slopes and along drainages to protect against soil erosion. Additional BMPs shall be employed as necessary to ensure reduced offsite erosion and to protect drainages from sediment.
- d. Site Protection. The pad shall be fenced to BLM standards to exclude livestock grazing for the first two growing seasons or until seeded species become firmly established, whichever comes later. The seeded species will be considered firmly established when at least 50 percent of the new plants are producing seed. The Authorized Officer will approve the type of fencing.

The operator shall submit an annual reclamation report by December 31 to the Authorized Officer. The report shall 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.

4. Noxious Weeds. The operator shall monitor for the presence of any Colorado-listed noxious weeds twice annually during the growing season until final reclamation of the pad is complete. The operator shall promptly treat and control any noxious weeds. A Pesticide Use Proposal must be approved by BLM prior to the use of herbicides.
5. Migratory Birds. 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.

6. Raptors. In order to protect nesting raptors, a raptor survey shall be conducted if any new construction activities commence between February 1 and August 15. If an active raptor nest is found within 0.25 mile of the pad prior to initiation of construction of the pad and associated facilities, construction shall not occur during a 60-day period beginning on the date the nest is found to be active. This restriction will not apply to any raptor nests that become active following initiation of construction or drilling operations. In the event of an active raptor nest within 0.25 mile of the pad, the operator is advised to ensure compliance with the Migratory Bird Treaty Act by contacting Creed Clayton of the U.S. Fish and Wildlife Service (USFWS) at the Glenwood Springs Energy Office at 970-947-5219 or at john_c_clayton@blm.gov. and Jeff Cook of the BLM at the Glenwood Springs Energy Office at 970-947-5231 or at jeffrey_cook@blm.gov.
7. Road and Well Pad. Due to the very severe erosion potential of area soils, the access road will be crowned, ditched, graveled, and include drainage features in accordance with BLM Gold Book standards. The well pad will be constructed to BLM Gold Book standards and include Best Management Practices (BMPs) designed to minimize erosion and offsite sedimentation. The road 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.
8. Paleontological Resources. All persons associated with operations under this authorization shall 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 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 Authorized Officer of any finds. The 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.
8. Visual Resources. It is recommended that above-ground facilities associated with production and storage be painted the non-reflective environmental color, Desert Tan (10YR6/3).
9. Big Game. Because the area provides important habitat for mule deer and in order to minimize impacts associated with winter drilling to the extent possible, a sixty-day timing limitation on construction and completion activities would occur between February 1 and April 1.

APPENDIX B

DOWNHOLE CONDITIONS OF APPROVAL

DOWNHOLE CONDITIONS OF APPROVAL
APPLICATION FOR PERMIT TO DRILL

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

Surface Location: **SWSW Sec. 14, T06S, R94W**

<u>Well Name</u>	<u>Well No.</u>	<u>Bottomhole Location</u>	<u>Lease</u>
Clough RWF	14-14	SWSW Sec. 14, T6S, R94W	COC-2799
Clough RWF	24-14	SESW Sec. 14, T6S, R94W	COC-2799
Clough RWF	314-14	SWSW Sec. 14, T6S, R94W	COC-2799
Clough RWF	324-14	SESW Sec. 14, T6S, R94W	COC-2799
Clough RWF	414-14	SWSW Sec. 14, T6S, R94W	COC-2799

Those Conditions of Approval identified in the Williams Production RMT Company Master APD (Approved April 27, 2006) for the Rulison Field Area E will apply.

Please contact Steve Ficklin (970-947-5213) or Jennifer Gallegos (970-947-5220) of the Glenwood Springs Energy office at least 24 hours:

- 1) pre- and post-spud
- 2) prior to running the surface and production casing
- 3) conducting the BOP test