U.S. Department of the Interior
Bureau of Land Management
Glenwood Springs Field Office
50629 Highway 6 & 24
PO Box 1009
Glenwood Springs, CO 81602

ENVIRONMENTAL ASSESSMENT

NUMBER: CO-140-2005-097 EA.

CASEFILE NUMBER: COC-24603.

PROJECT NAME: Application for Permit to Drill: GM21-9, GM321-9, GM524-4.

LEGAL DESCRIPTION: 691'FNL, 562'FWL, SEC 9 T7S R96W (Surface location).

APPLICANT: Williams Production RMT.

DESCRIPTION OF PROPOSED ACTION AND ALTERNATIVES

Proposed Action: Williams Production proposes to drill the above named wells from the existing MV 16-9 location. These wells were approved in the 2004 South Grand Valley Geographic Area Plan. The pad location proved unstable during construction and the site abandoned. The new location for the wells is the existing MV 16-9 location, which is approximately 200 meters west of the original location. The existing pad will be expanded by approximately 30 feet to the south to accommodate the new wells.

Gap-wide and site-specific Conditions of Approval in the South Grand Valley Geographic Area Plan for this location will apply.

No Action Alternative: The proposed action affects federal subsurface minerals encumbered with federal oil and gas leases granting the lessee the right to explore and develop the oil and gas leases. The No Action Alternative constitutes a denial of the proposed action. Absent a nondiscretionary statutory prohibition against drill, the BLM cannot deny the right to drill and develop the leasehold. Only congress can completely prohibit development activities. Overall, the No Action Alternative has been considered but eliminated from analysis due to existing lease rights involved.

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, as modified to drop the locations that do not conform to the lease stipulations, 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 Glenwood Springs Field Office is in the ongoing process of completing Land Health Assessments on a landscape basis. The field work related to a formal Land Health Assessment was completed on the lands affected by the actions addressed in this EA in 2004 and the Report and Determination Document are currently in draft form. Preliminary results indicate that the area surrounding the proposed action was not meeting the Land Health Standard 3 for healthy plant and animal communities. The primary factor involved in the failure to achieve the standard is habitat loss and fragmentation due to activities and facilities associated with natural gas development. Based on the findings of the assessment, the authorized officer may take appropriate action to achieve conformance with the standards or implement mitigating measures to maintain or prevent a further decline in 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. 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/Mitigation: 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_{10} 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 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 would not likely produce adverse effects to air quality in light of the analysis from air quality modeling contained in the Roan Plateau plan.

However, truck traffic during the initial rig-up, well completion, rig-move, and production activities would likely produce high levels of dust in without dust abatement.

- Emissions of particulate matter will be reduced through control of dust during construction and completion, and production activities. The operator will water the road and/or use magnesium chloride for dust abatement or other approved surfactant by the authorized officer.

AREAS OF CRITICAL ENVIRONMENTAL CONCERN

Affected Environment: There are no Areas of Critical Environmental Concern within the proposed action area.

CULTURAL RESOURCES

Affected Environment: The cultural resource inventory (GSFO# 1104-1) completed for the original GM21-9, GM321-9, GM524-4 wells also include the area of the MV16-9 location. No historic properties were identified that are eligible for listing on the National Register of Historic Places. Formal consultation was not initiated with the Colorado State Historic Preservation Officer for these well locations and a determination of "No Historic Properties Affected" was made based upon results of the inventories, the BLM/SHPO National and Colorado Protocols (1997 and 1998) and National Historic Preservation Act (16 U.S.C. 470f).

Environmental Consequences: 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[1].

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

Affected Environment: The proposed action area does not occur in a floodplain.

INVASIVE, NON-NATIVE SPECIES

[1] **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
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Affected Environment: The proposed wells would be drilled from the existing MV 16-9 pad with additional disturbance of approximately 30 feet to the south required to accommodate the new wells. Surveys have not been done on the existing MV 16-9 pad to determine whether noxious weeds currently exist on or in the vicinity of the pad.
The pad lies in sagebrush/pinyon-juniper vegetation.
Environmental Consequences/Mitigation: Surface-disturbing activities provide a niche for the invasion and establishment of noxious weeds. The APDs and Conditions of Approval include measures to re-vegetate the well site with native perennial shrubs and grasses. The project proponent will adhere to the specified seed mix and will supply BLM with the seed tags from the seeding operation. Reclamation activities will continue, including reseeding if necessary, until BLM's interim reclamation objectives are achieved. In addition, a standard Condition of Approval is attached requiring the project proponent to promptly treat and control any invading noxious weeds. A Pesticide Use Proposal must be approved by BLM prior to commencing any herbicide spraying.

MIGRATORY BIRDS

Affected Environment:
The existing MV 16-9 well pad is located within sagebrush and mixed mountain shrubland habitat with some pinyon-juniper trees. Given the mix of vegetation at the site, the project area provides nesting and foraging habitat for a variety of migratory bird species. A few species may be present that are on the U. S. Fish and Wildlife's Birds of Conservation Concern list (USFWS 2002). Within the sagebrush habitat the sage and Brewer's sparrow may occur. Within the mixed mountain shrub habitat the Virginia's warbler may be present, and within the pinyon-juniper woodlands the pinyon jay, gray vireo, and black-throated gray warbler may exist. No raptors are known to nest near the well pad. Red-tailed hawks and Cooper's hawks both nest within 5 miles of the well pad. These and other raptors likely forage near the project area.

Environmental Consequences/Mitigation:
The proposed action calls for the redisturbance of the existing MV 16-9 well pad to accommodate directional wells. Only a very minor amount of additional habitat disturbance will result as the pad will be expanded approximately 30 to the south. The action will result in only a very small amount of additional habitat loss and fragmentation. It is likely that birds in the nearby vicinity will be displaced from the area to adjacent habitats due to human presence and noise and commotion associated with drilling and completion activity.

NATIVE AMERICAN RELIGIOUS CONCERNS

Affected Environment: The Southern Ute, Ute Mountain Ute, and the Ute tribe of the Uinta and Ouray were notified of the proposed GAP on February 4, 2004 for the South Grand Valley Gap which encompasses this location. No comments were received by March 15, 2004. At present, no Native American concerns are known by the GSFO 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 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, boreal toad, yellow-billed cuckoo, razorback sucker, Colorado pikeminnow, bonytail chub, and humpback chub.

Specific to the project location, the area provides no habitat for any federal or state listed species. In addition, no federal candidate or proposed species or their habitat is found in the area. The BLM sensitive species Colorado River cutthroat trout are know to reside in Parachute Creek within 2 miles of the action.

Environmental Consequences/Mitigation: The proposed wells would be drilled from the existing MV 16-9 pad in Riley Gulch. The existing pad would need to be expanded approximately 30 feet to the south for the new wells.

Colorado River cutthroat trout:
The proposed action should have no impact to these species. The MV 16-9 well pad already exists and will be redisturbed to accommodate new directional wells. Assuming timely reclamation of the well pad erosion and offsite sedimentation should be minimal. Parachute Creek should not have any detectible changes in sediment via the proposed action.

Due to a lack of habitat and species occurrence records, the project should have "No Effect" on any federally listed plant or animal species and no impact on any other special status species.

Analysis on the Public Land Health Standard for Threatened & Endangered species:
The proposed action area had a formal Land Health Assessment completed on it in 2004, and the report is pending completion. Results showed that Standard 4 was being met for the area, but that portions of Riley Gulch were not meeting due to poor road maintenance, culvert design, and seasonal road use. Excessive erosion of sediments was occurring into the gulch which is a tributary to Parachute Creek. The proposed action should have minimal additional effects to Colorado River cutthroat trout located downstream in Parachute Creek.

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: The proposed action area lies in Riley Gulch as part of the Parachute Creek Watershed that subsequently drains into the Colorado River. Classified uses for this portion of the Colorado River and its above named tributaries are Aquatic Life Class 2, Recreation Class 2, and Agriculture.

The state of Colorado has developed the 303(d) list which identifies impaired water bodies, waters not meeting water quality standards with technology based controls alone. No streams within the proposed action watershed area are known to be listed on the 303(d) list; suggesting water quality standards are currently being met.

Environmental Consequences/Mitigation: Analysis in the soils section of this document and the South Grand Valley Gap soils section provide required mitigation for the Riley Gulch drainage. Recent proper functioning condition assessments and multiple site visits to Riley Gulch indicate that sediment has been and continues to be displaced into the lower and middle sections of the stream channel of Riley Gulch. Associated road maintenance activities have likely precipitated the sedimentation as they are associated with gas field development to which the proposed action is a connected part.

- In order to mitigate the effects of these actions and to ensure protection of soil and water resources from increased degradation, the mitigation recommended in the soils section of this document is required.

  Analysis on the Public Land Health Standard for water quality: The proposed action would not likely prevent standard 5 from being met if the above mitigation is implemented. This action is not projected to have any noticeable impacts on groundwater resources within the project area.

WETLANDS & RIPARIAN ZONES (includes a analysis on Standard 2)

Affected Environment: The Proposed Action is not located within wetlands or riparian zones.

Analysis on the Public Land Health Standard for riparian systems: There would be no affect on the Public Land Health Standard for riparian systems.

WILD AND SCENIC RIVERS

Affected Environment: There are no un-studied rivers, rivers found to eligible or designated Wild and Scenic Rivers within the proposed project area.

WILDERNESS

Affected Environment: There are no designated Wilderness areas, Wilderness Study Areas or citizens proposed wilderness areas within the proposed project area.

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 occurs on one soil map unit:

The Torriorthens-Camborthis Rock-outcrop complex is described having steep slopes and moderate to severe erosion hazard dependant on slope. This complex makes up the remaining areas of Riley gulch extending beyond the NWSW of Section 4 into Sections 5 and 8 as well as into Sections 9, 10, and 11.

Due to the inherent erosion potential and the associated steep slopes of the affected environment, sediment transport in Riley Gulch is of concern. Recent field visits to the proposed action area and along connected roads has shown that previous mitigation proposed in the Grand Valley Gap has not been adhered to. The mitigation described below should be implemented as conditions of approval. Mitigation would provide for protection of soils, maintain soil productivity, improve water quality and minimize soil erosion for reclamation of surface disturbance during and following the implementation of the proposed action.

Mitigation:

- The existing road, that leads to the proposed action area, in Riley Gulch, will be crowned, ditched and graveled prior to implementation of the proposed action.

- The type of gravel to be used will include the use of one of the following:

    - 1½ inch CDOT (Colorado Department of Transportation) Class 5 gravel wet and rolled in
    - Locally obtained road materials approved by the Authorized Officer

- Graveling of roads should be periodically re-graveled as directed by the authorized officer. Initial gravel application will be a minimum of 4 inches. When rutting within the traveled way becomes greater then 6 inches additional gravel will be applied.

- All culverts that have currently failed or culverts not aligned in the natural drainage of the channel, should be replaced and aligned with the natural channel of the drainage with a gradient that maintains the natural drainage velocity to decrease sedimentation and erosion. The size of the culvert must be large enough to pass a 10-year flood without development of static head at the entrance. Balance the cumulative roadway grade and culvert size to avoid serious head and velocity damage for a 25-year flood (BLM Manual Section 9113, H-a. Drainage Elements).

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

VEGETATION (includes an analysis on Standard 3)

Affected Environment: The existing MV 16-9 well pad is located in sagebrush/pinyon-juniper habitat. The proposed new wells would be drilled from the existing pad with additional disturbance of approximately 30 feet to the south to accommodate the new wells. The MV 16-9 pad has been reseeded with grasses and forbs.

Environmental Consequences/Mitigation: The existing predominantly herbaceous vegetation on the MV 16-9 pad would be removed for the new wells. The proposed pad expansion would impact sagebrush and pinyon-juniper trees. The proposed action would result in a long-term loss of vegetation on the portions of the pad needed for ongoing production activities and a long-term loss of mature pinyon and juniper vegetation throughout the disturbed area.

Mitigation:
Any pinyon trees removed during construction activities would be removed from the site to a suitable disposal location, chipped on location to eliminate any additional attraction to the tree(s) from ips beetles, or immediately buried on location during initial earthwork disturbance.

A specified seed mix designed to meet interim reclamation standards and land health standards using a mixture of native perennial grasses, forbs, and shrubs shall be applied. The seed mix should deter the establishment of noxious weeds and provide for establishment and recruitment of a diverse native plant community. The following seed mix and rates will be used on all disturbed surfaces, including pipelines:

Species of Seed	Variety	Application Rate (lbs/acre)
Northern sweetvetch		1.0
Four-wing saltbush	Rincon	2.0
Shadscale		2.0
Wyoming big sagebrush		0.5
Western wheatgrass	Arriba	2.5
Bluebunch wheatgrass	P7	2.0
Salina wildrye		1.5
Bottlebrush squirreltail		0.5
Sandberg bluegrass		1.0
Total:		13.0 lbs. PLS/acre Total

The above rate of application is listed in pounds of pure live seed (PLS)/acre. The seed will be certified and there will be no primary or secondary noxious weeds in the seed mixture. 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 centers, and recontouring, the stockpiled topsoil will be evenly spread over the reclaimed areas(s). Prior to reseeding, all disturbed surfaces will be scarified and left with a rough surface. No depressions will be left that will trap water and form ponds.

The pad will be seeded within 24 hours after completing seedbed preparation unless a change is requested by the operator and approved by the Authorized Officer. Prepare the seedbed by contour cultivating 4-6 inches deep**.** Drill seed ¼ to ½ inch deep following the contour. In areas that cannot be drilled, broadcast seed at 1½ times the application rate and cover ¼ to ½ deep with a harrow or drag bar. All seeding will be conducted between September 1st and May 1st. 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.

A standard Condition of Approval will be attached requiring the project proponent to promptly treat and control any invading noxious weeds. The operator will initiate a weed detection and control program beginning the first growing season after surface disturbance occurs and continue through the life of the wells. A Pesticide Use Proposal must be approved by BLM prior to commencing any herbicide spraying.

In addition, all areas being reclaimed will be fenced to exclude livestock until seeded species are established and well-rooted, and 55% of seeded species are producing seed. (This will require a minimum of two growing seasons but may be longer depending on climatic conditions.)

With implementation of reclamation practices identified in the COAs, establishment of desirable herbaceous vegetative on the sites can be expected within 2-3 years following completion of drilling. Monitoring of the reclamation would occur as identified in COAs.

Analysis on the Public Land Health Standard for plant and animal communities (partial, see also Wildlife, Aquatic and Wildlife, Terrestrial): Given the application of the COAs above, the proposed action should not result in a failure to achieve Standard 3 for healthy plant communities.

WILDLIFE, AQUATIC (includes an analysis on Standard 3)

Affected Environment:
The proposed action is within ½ mile of Riley Gulch. Riley Gulch is a perennial stream that contains aquatic insects but is too small to harbor fish. It is a tributary to Parachute Creek which contains rainbow, cutthroat, and brown trout in addition to a variety of aquatic insects.

Environmental Consequences/Mitigation:
The proposed action calls for the redisturbance of the existing MV 16-9 well pad to accommodate direction wells. Very little new disturbance is anticipated. If timely reclamation is conducted, and best management practices are implemented, the action should have minimal erosion or sedimentation potential offsite. Impacts to aquatic wildlife should be minimal.

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 for the area in 2004. Results showed that Standard 3 was not being met for portions of Riley Gulch due to poor road maintenance, culvert design, and seasonal road use. Excessive erosion of sediments was occurring into the gulch which is a tributary to Parachute Creek. The proposed action should have minimal additional impact on the watersheds ability to meet Standard 3 for aquatic wildlife.

WILDLIFE, TERRESTRIAL (includes an analysis on Standard 3)

Affected Environment:
The existing well pad is located within sagebrush, mountain brush, and pinyon-juniper woodland vegetation with an understory comprised of grasses and forbs. A variety of wildlife species may be found in the area. The area contains habitat for many species of big game, small game, and nongame mammals and birds. The well pad is located in an area mapped as crucial big game winter range by the Colorado Division of Wildlife.

Environmental Consequences/Mitigation:
General impacts (short term, long term, and cumulative) to terrestrial wildlife were adequately addressed in 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 to the well sites will be prevented due to controlled access on private lands. This will minimize disturbance and reduce effective habitat loss. The action will result in only minor additional habitat loss as the existing pad is expanded 30 feet to the south to accommodate directional wells.

> 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."*

No new disturbance will result as an existing well pad will be used to accommodate new directional wells. 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.

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 for this area in 2004. Results showed that large portions of the watershed are not meeting Standard 3 for terrestrial wildlife. This is due to primarily to natural gas development that has fragmented habitat and reduced habitat connectivity and quality. The proposed action will have no bearing on the watersheds ability to meet Standard 3 for terrestrial wildlife.

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

ACCESS AND TRANSPORTATION
Environmental Consequences/Mitigation: Existing road access to the pad is via the road up Riley Gulch. Truck traffic will be the heaviest during rig-up, and completion activities. The proposed drilling and completion activities on the federal well is scheduled to begin in August 2005.

GEOLOGY AND MINERALS
Affected Environment/Environmental Consequences/Mitigation: The target gas zones for the proposed directional wells in this region are generally sands within the Williams Fork Formation. The shallower Wasatch G sands may contain gas but are not an economic target at present. All of the coal zones are generally too deep for currently economic underground mining. The operator proposes to cement the production casing to the extent that it should isolate the formations and protect all potentially producible gas zones.

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: These existing well pad falls 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.

VISUAL RESOURCES:

Affected Environment: The proposed action takes place within an area classified as Visual Resource Management (VRM) Class II in the 1984 Glenwood Springs Resource Management Plan. For purposes of this analysis County Road 215, Interstate 70 and Battlement Mesa will be used for Key Observation Points (KOPs).

The objective of Class II areas 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.

While the 1999 Oil and Gas SEIS stipulations provide some protection for visual resources, the proposed action on the existing location are authorized on older leases which have no visual resource stipulations attached.

Environmental Consequences/Mitigation: Short term visual impacts would occur on the pad due to construction, drilling and completion activities and related elements introduced into the landscape. Drilling activity typically occurs 24 hours per day. The addition of a new elements into the landscape (both moving and stationary) related to construction activities such as, dozers, drilling rigs, truck traffic, other heavy equipment, dust, flaring, lights, etc., will change the existing landscape character and will attract attention.

The existing pad and its associated roads is not visible from I-70, CR 215 or adjacent communities and would meet VRM Class II objectives. However, cumulatively the area as a whole has incurred both short term and long term term impacts and does not meet VRM Class II objectives due to the increased activities and associated new elements that have been introduced into the existing landscape.

Mitigation:
To help mitigate the contrast of bare re-contoured slopes, reclamation will include measures to feather cleared lines of vegetation, and to save and re-distribute cleared trees, debris, and rock over re-shaped cut and fill slopes.

To reduce the visibility of production facilities, facilities will avoid visually exposed locations (should be located against backdrops or cut side of pad) and will be placed to allow the maximum re-shaping of cut and fill slopes.

To reduce the visibility of production facilities, paint all above ground facilities a color determined on the on-site reviews (including containment rings) to blend in with the existing landscape.

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: 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 has 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

PERSONS / AGENCIES CONSULTED:

INTERDISCIPLINARY REVIEW:

Name	Title	Area of Responsibility
Bill Barter	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
Jim Wilkinson	Geologist	Ground Water/Minerals
Jim Wilkinson	Geologist	Paleontology
Mike Kinser	Rangeland Management Specialist	Riparian

Wayne Bankert	Petroleum Engineer	Downhole Conditions of Approval
Kay Hopkins	Outdoor Recreation Planner	Visual Resources
Mark Wimmer	Rangeland Management Specialist	Soil, Water and Air
Mike McGuire	Rangeland Management Specialist	Range

FONSI

CO-140-2005-097 EA

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 Applications for Permit to Drill the GM 21-9, GM 321-9, and GM 524-9 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.
3. The proposed action is in conformance with the Glenwood Springs Resource Management Plan Amendment for Oil and Gas Leasing and Development and will not exceed the impacts beyond those already addressed in the Final Supplemental Environmental Impact Statement, dated January 1999.

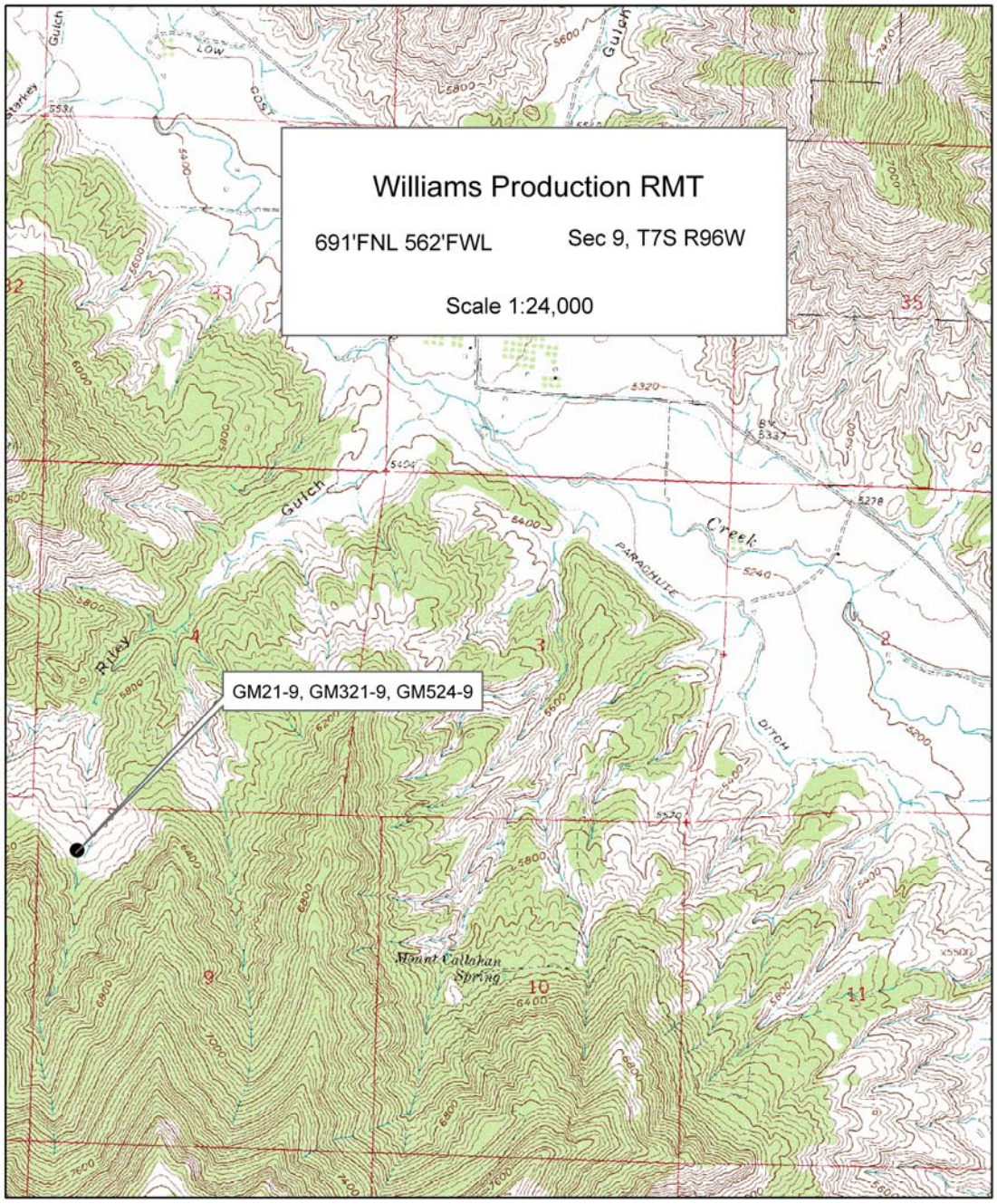
MITIGATION MEASURES: Mitigation measures are included in the Surface Use Plan and Conditions of Approval for both surface and drilling operations.

NAME OF PREPARER: Bill Barter, Natural Resource Specialist

SIGNATURE OF AUTHORIZED OFFICIAL: _____
Authorized Officer

DATE SIGNED: JUL 12 2005

ATTACHMENTS: Map, Conditions of Approval.


Williams Production RMT
691'FNL 562'FWL
Sec 9, T7S R96W
Scale 1:24,000
GM21-9, GM321-9, GM524-9
Gulch
Riley
Gulch
Creek
PARACHUTE
DITCH
Mount Callahan
Spring

CONDITIONS OF APPROVAL
APPLICATION FOR PERMIT TO DRILL

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

Surface Location: **Lot 4 Sec. 9, T07S, R96W**

Well Name	Well No.	API No.	BH Location	Lease	CA No.
GM	**21-9**	**05-045-10095**	**NENW Sec 9, T07S, R96W**	**COC-24603**	**NA**
GM	**321-9**	**05-045-10090**	**NENW Sec 9, T07S, R96W**	**COC-24603**	**NA**
GM	**524-4**	**05-045-10080**	**SWSW Sec 4, T07S, R96W**	**COC-24603**	**NA**

Those Conditions of Approval identified in the Williams Production RMT Company Master APD (Approved January 30,2004) for the Grand Valley Field Area A will apply.

Please contact Ed Fancher (970) 244-3039 or Carol Snyder (970) 244-3033 of this office at least 24 hours prior to running the surface and production casing and conducting the BOP test.

Appendix B

Standard Mitigation Measures for all GAP Wells

ROADS:

- All new and existing roads in Riley Gulch and in N ½ Section 11 of the project area should be graveled within two months following backfilling of proposed pipeline construction (see map, Appendix D). If it is determined that no upgrade in pipeline construction is needed in any given stretch of the existing roads in Riley Gulch or in N ½ Section 11 of the project area, gravelling should be accomplished prior to December 1 of that year.

- Areas exclusive of Riley gulch and Section 11 of the proposed action should be subject to the use of Best Management Practices (BMPs) in road construction and repair following backfilling of upgraded pipelines. If it is determined that no upgrade in pipeline construction is needed in any given stretch of the existing roads exclusive of Riley Gulch or in Section 11 of the project area, 2 or more BMPs (described below) should be implemented prior to December 1 of the year of the determination. BMPs include the following:

    - Temporary slope drains
    - Vegetative buffer strips
    - Diversion dikes
    - Conveyance channels
    - Silt fences
    - Straw bales
    - Culvert pipes
    - Drainage laterals (water bars/dips)

- The type of gravel to be used will include the use of one of the following:

    - Natural shale material
    - 1 ½ inch CDOT (Colorado Department of Transportation) Class 5 gravel wet and rolled in
    - Locally obtained road materials approved by the Authorized Officer

- Graveling of roads should be periodically re-graveled as directed by the authorized officer. Initial gravel application will be a minimum of 4 inches. When rutting within the traveled way becomes greater then 6 inches additional gravel will be applied.

- All culverts that have currently failed or culverts not aligned in the natural drainage of the channel, should be replaced and aligned with the natural channel of the drainage with a gradient that maintains the natural drainage velocity to decrease sedimentation and erosion. The size of the culvert must be large enough to pass a 10-year flood without development of static head at the entrance. Balance the cumulative roadway grade and culvert size to avoid serious head and velocity damage for a 25-year flood (BLM Manual Section 9113, H-a. Drainage Elements).

- All culverts that have currently failed or culverts not aligned in the natural drainage of the

channel, should be replaced and aligned with the natural channel of the drainage with a gradient that maintains the natural drainage velocity to decrease sedimentation and erosion. The size of the culvert must be large enough to pass a 10-year flood without development of static head at the entrance. Balance the cumulative roadway grade and culvert size to avoid serious head and velocity damage for a 25-year flood (BLM Manual Section 9113, H-a. Drainage Elements).

- As deemed necessary by the Authorized Officer, geo-textile fabrics or similar material may be required on steep raw areas that are difficult to establish vegetation on, particularly steep road cuts and the larger cut banks around well pads. The use of these soil stabilizing materials will aid in soil retention. To improve vegetation establishment consider the use of hydromulch which will adhere to steep slopes and may assist with vegetation establishment and reduce offsite sediment concerns to downstream fisheries.

WILDLIFE:

- No surface completion activities are permitted from January 15 to March 15.

- Upon completion of road improvements, all production related activities including well checks, removal of excess water and non-emergency maintenance shall be conducted between the hours of 10:00 am and 3:00 pm during winter months during non-emergencies. This will limit disturbance to wintering big game during daily peak activity times in those areas where road improvements facilitates use of the roads during any time of day, versus early morning times when roads are frozen/passable.

- Williams has voluntarily agreed to gate and lock the main access road during the winter months (December 1 to April 30) to eliminate non-authorized incidental human use of the area. Gate construction should be completed by December 1, 2004 and locking started on this same date. This will eliminate further human intrusion into important winter range habitats during the critical winter months.

- No Drilling Activity from December 1 to April 30:
  Williams has agreed to voluntarily conduct no pad construction or drilling activity from December 1 to April 30 on all of the leases located within the GAP area. Compliance with this mitigation measure will apply to all drilling activities on all lease parcels located within the project area. The timing, December 1 to April 30, will supersede the timing limitation of January 1 to May 15 identified on lease # COC-34553-A for consistency purposes. All downhole and surface well completion activity will be allowed to occur for the month of December, and first 2 weeks of January and then the 60-day Completion COA noted above will take effect which will eliminate all downhole and surface well completion activity from January 15 to March 15.

  This will reduce the amount of habitat effectively lost, and subsequently the mitigation acreage by 835-acres from 1,727 to 892-acres. By eliminating drilling during the entire winter, and completion activities during the majority of winter, the project area would default back to near production level activity as currently conducted. For consistency and ease of implementation, the voluntary timing limitation will supercede the timing limitation found on the COC-34553-A lease and would apply to the entire project area.

  Avoiding drilling and completion during the winter months would have great benefit to resident mule deer that concentrate on limited winter range habitats located within the project area. More

acreage of preferred habitat would be made accessible and usable, and mule deer energy consumption would be reduced due to the reduction of vehicular/human activity stressors.

- Gating of the Main Access Road during the Winter
  Williams has agreed to gate and lock the main access road during the winter months (December 1 to April 30). This will help to eliminate incidental use of roads located within the project area. This measure will reduce the amount of habitat effectively lost, and subsequently the mitigation acreage by 50-acres from 892-acres to 842-acres. Rationale to support this reduction is difficult not knowing the amount of incidental use occurring on roads located within the project area during any given month.

VISUAL IMPACTS:

- To mitigate the contrast of bare re-contoured slopes, reclamation will include measures to feather cleared lines of vegetation, and to save and re-distribute cleared trees, debris, and rock over re-shaped cut and fill slopes.

- To reduce the visibility of production facilities, facilities will avoid visually exposed locations (should be located against backdrops or cut side of pad) and will be placed to allow the maximum re-shaping of cut and fill slopes.

- To reduce the visibility of production facilities, paint all above ground facilities (including containment rings) to blend in with the existing landscape.

1. The operator is responsible for applying dust abatement measures as needed or directed by the Authorized Officer

2. The surface location will be constructed as presented and modified by the surveyor, Williams, and BLM representatives during the on-site. Any significant additional alterations to this design will need to be presented to and approved by the Authorized Officer prior to construction.

3. All disturbed areas not necessary for drilling and producing operations will undergo reclamation after completing dirtwork and operations (interim reclamation). If the well is a producer, the surface area of the drill pad not needed for facilities or operations and unused portions of the road will be reclaimed to BLM standards. If the well is not a producer “final reclamation” standards apply.

4. Reserve pit fluids will be back filled within one year of construction or to the end of the succeeding summer (August 31) to allow for evaporation of fluids, unless an alternative method of disposal is approved. The back filling of the reserve pit will be done in such a manner that the mud and associated solids will be confined to the pit and not squeezed out and incorporated in the surface materials. There will be a minimum of 3 feet of cover (overburden) on the pit. When work is complete, the pit area will support the weight of heavy equipment without sinking.

5. All pits, cellars, rat holes and other bore holes unnecessary for further lease operations, excluding the reserve pit, will be back-filled immediately after the drilling rig is released to conform to surrounding terrain. Pits, cellars and/or bore holes that remain on location must be fenced as specified for the reserve pit.

6. Compaction and construction of the berms surrounding the tank batteries will be designed to prevent lateral movement of fluids through the utilized materials, prior to storage of fluids. The berms must be constructed to contain at a minimum 110 percent of the storage capacity of the largest tank within the berm. All loading lines will be placed inside the berm.

7. All surface disturbances shall be recontoured and revegetated according to site-specific Condition of Approval in Appendix C.

8. The unused disturbed areas surrounding the well location and along the road will be recontoured to blend as nearly possible with the natural topography.

9. All compacted portions of the pad, road, and pipeline route will be ripped to a depth of 18 inches unless in solid rock. Prior to seeding, stockpiled topsoil (stripped surface material) will be spread to a uniform depth that will allow the establishment of desirable vegetation.

10. All slopes reclaimed at a slope steeper than 2:1 will employ extraordinary seeding and/or erosion control measures, such as hydroseeding, mulching and/or geotextiles (to be determided at the time of reclamation by the BLM Authorized Officer).

11. The reclamation contractor shall utilize a seed drill capable of correctly planting the various types of seeds included in the specified seed mixes, at the proscribed rates, and at the appropriate depth. Multiple seed boxes for different types of seed will be necessary. Agitators, picker wheels, and larger seed tubes will be necessary in at least one box to correctly handle and plant fluffy seed.

12. For seed planted using broadcast methods, raking or harrowing immediately before and after seeding will be necessary to ensure adequate seed/soil contact. Broadcasting shall occur after drill seeding but before any mulching with straw or other material. Broadcast seeding shall not occur on windy days.

13. Reclamation equipment shall be cleaned prior to use in the GAP area to eliminate the potential for spread of noxious weeds or other undesirable non-native species. All leftover seed from prior reclamation jobs will be removed from seeding equipment.

14. The rate of application of the seed mix is listed in the site-specific Conditions of Approval and the Master APD. The seed will be certified and there will be no primary or secondary noxious weeds in the seed mixture. The operator shall notify the Authorized Officer 24 hours prior to seeding and shall provide evidence of certification of the above seed mix to the Authorized Officer. The operator shall provide the BLM with a record of dates of seeding, rates of seed applications and seed tags for each seeding operation within 60 days.

15. Areas being reclaimed will be fenced to exclude livestock for the first two growing season or until the seeded species have established. The type of fencing will be approved by the Authorized Officer.

16. Refer to Appendix I, Surface Reclamation, in the Draft SEIS for Oil and Gas Leasing Development (pages I-1 through I-8) for specific reclamation goals, objectives, timelines, measures and monitoring methods. These guidelines will be applied in completing the reclamation of disturbed surfaces on well pads, access roads, and pipelines.

17. If it is determined by the Authorized Officer that the above reclamation standards are not being met, the operator will be required to submit a plan to correct the problem. Approval of the plan may require special reclamation practices such as mulching, the method and time of planting, the use of different plant

species, soil analysis to determine the need for fertilizer, fertilizing, seed-bed preparation, contour furrowing, watering, terracing, water barring, and the replacement of topsoil.

18. Prior to construction, an Integrated Weed Management Plan (IWMP) shall be developed by Williams in consultation with the BLM for the entire GAP area. This IWMP shall be implemented throughout the development, production, and abandonment phases of the proposed project.

19. Noxious weeds which may be introduced due to soil disturbance and reclamation will be treated by methods to be approved by the Authorized Officer. The Pesticide Use Permit shall be on record with the BLM for treatment of noxious weeds.

20. Protect the red-tailed hawk nest site located in Township 7 North, Range 96 West, Section 11 by seeking voluntary compliance to the TL-6 raptor timing limitation. In the event this is not possible, a 60-day timing limitation should be applied to a ¼ mile buffer around the nest site to minimize disturbance during a portion of the critical nesting period (April 15 to June 14).

21. Historic, Archaeological and Paleontological:

The operator is responsible for informing all persons in the area who are associated with this project that they will be subject to prosecution for knowingly disturbing historic, archaeological, paleontological, or sites with scientific value or for collecting artifacts. If historic or archaeological materials are uncovered during construction, the operator is to immediately stop work that might further disturb such materials, and contact the Authorized Officer.

Education
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 artifacts, the person or persons will be subject to prosecution.

Discovery
Pursuant to 43 CFR 10.4(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 43 CFR 10.4(c) and (d), activities must stop in the vicinity of the discovery and the discovery must be protected tor 30 days or until notified to proceed by the Authorized Officer.

If in connection with operations under this contract the project proponent, its 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 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 operator as to:

-whether the materials appear eligible for the National Register of Historic Places;

-the mitigation measures the operator will likely have to undertake before the 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 to confirm, through the State Historic Preservation Officer, that the findings of the Authorized Officer are correct and that 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 material 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 operator will be allowed to resume construction.

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

Antiquities, historic, prehistoric ruins, paleontological 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 that are related to the authorization activities will be mitigated at the proponent•s cost.

22. Should scientifically important fossils be encountered during operations, contact the BLM immediately and avoid any damage to the resource. If scientifically important fossils are encountered during operation and cannot be avoided, additional mitigation measures may be necessary.

Site-Specific Mitigation for South Grand Valley GAP Wells

Existing surface location: MV 16-9.
New Wells: GM 21-9
GM 321-9
GM 524-9

1. All surface facilities will be painted Desert Brown (10YR 6/3).
2. Reshape all slopes to 3:1 or flatter.
3. The recommended seed mix of this location is the BLM Salt Desert Shrub Mix found the Master APD. Use an application method discussed in the Standard Mitigation Measures for all GAP Wells.

Note: Delete the Sanfoin and Globemallow from the Salt Desert Shrub Mix and replace with ½ pound each Ladak Alfala, Harry False goldaster, and Blue flax.

Standard Mitigation Measures for all GAP Wells (Appendix B) will also apply to this location.

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