

**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-140-2005-112 EA.

CASEFILE NUMBER: COC-27874.

PROJECT NAME: Application for Permit to Drill: (Boruch)

Existing location: GV3-11.

Proposed wells: Boruch GM533-11, Boruch GM433-11, Boruch GM434-11.

Existing location: GM44-11. reclaimed

Proposed wells: Boruch 34-11, Boruch 534-11. Boruch GM334-11.

Existing location: GM 343-11: reclaimed

Proposed wells: GM 33-11, Boruch GM333-11.

LEGAL DESCRIPTION: SESE, NWSE Sec 11, T7S, R96W.

APPLICANT: Williams Production RMT.

DESCRIPTION OF PROPOSED ACTION AND ALTERNATIVES

Proposed Action: Williams Production RMT proposes to drill the above named wells from fee surface/fee minerals (Boruch) into federal mineral from three existing surface locations. A surface use agreement is in place.

The project is 2 miles west of the town of Parachute and one mile north. Access is via gravel and dirt roads. The road passes two residences and 2 more are within one-half mile of the proposed pad locations.

The GM 44-11 and the GM 343-11 pads were reclaimed and seeded in the Spring of 2005. The GM 343-11 and the GV3-11 production facilities will be collocated at the existing GV3-11 pad. The facilities for the GM444-11 location will be located on that pad.

Existing location: GV3-11. greatest cut 10.8 ft; greatest fill 7.8 ft. Approximately area of disturbance 1.6 acres

Existing location: GM44-11: reclaimed , greatest cut 19.7 ft; greatest fill 14 ft. Approximate area of disturbance 1.8 acres

Existing location: GM 343-11: reclaimed, greatest cut 7.6ft; greatest fill 1.7 ft. Approximate area of disturbance 1.5 acres

Lease Stipulations associated with this lease:

Wilderness Protection.
 Surface Disturbance
 Plan of Operations
 Cultural Resources
 Timing limitation – Wildlife habitat

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

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

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

Name of Plan: Glenwood Springs Resource Management Plan.

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

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

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

Standards for Public Land Health: In January 1997, Colorado Bureau of Land Management (BLM) approved the Standards for Public Land Health. The Glenwood Springs Field Office is in the ongoing process of completing Land Health Assessments on a landscape basis. The lands affected by the proposed action were the subject of a Land Health Assessment in 2004. The draft Report and Determination Document indicate that this portion of the landscape was not meeting Standard 3 for healthy animal communities. The primary cause of failing to meet the standard was habitat fragmentation due to natural gas development on both public and private lands.

Based on the findings of the assessment, the authorized officer may take appropriate action to achieve conformance with the standards or implement further mitigating measures on future actions to maintain or prevent a further decline in land health.

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 (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 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 road construction activities would likely produce high levels of dust in dry conditions without dust abatement.

Emissions of particulate matter will be reduced through control of dust during road construction 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: No cultural resource inventories have been conducted this well location as it was originally fee-fee well location permitted by the Colorado Oil and Gas Commission. Since the proposed well location is on previously disturbed land this action falls under environmental constraints precluding intensive Class III coverage according to the BLM/Colorado State Historic Preservation Office Protocol (1998) and BLM Colorado State Archaeologist guidance (e-mail Haas 1/13/05).

- Previous natural ground disturbance that has modified the surface so extensively that the likelihood of finding cultural resources is negligible.
- Human activity within the past 50 years that has created a new land surface such that all traces of cultural resources have been eradicated.
- “When previously constructed well pad(s), access road(s), and other related improvements are used without additional expansion, no additional cultural inventory is required to assess the potential adverse effects to historic properties” (Dan Haas, BLM State Archaeologist guidance 2005).

Environmental Consequences: According to the 2001 revised regulations [36CFR 800.4(d)(1)] for Section 106 of the National Historic Preservation Act (16U.S.C 470f) a determination for the proposed wells is “No Effect” as long as the new disturbance is confined to the existing disturbance. No formal consultation with the Colorado State Historic Preservation Office (SHPO) was initiated in accordance with the Colorado BLM/SHPO Protocol (1998) and National

Protocol (1997) for these well locations. 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:

- Existing ground disturbance survey plats are needed for these existing wells prior to any new ground disturbance to comply with State Office Guidance.
- If any additional ground disturbance extends beyond the existing pad footprints, additional cultural resource inventory will be required. (BLM State Office guidance – Haas 1-13-05)
- 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 population¹.

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

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

Affected Environment: The proposed action does not take place in a flood plain.

INVASIVE, NON-NATIVE SPECIES

Affected Environment: No noxious weed surveys have been conducted on these 3 existing well pads since they were originally fee-fee well locations permitted by the Colorado Oil and Gas Conservation Commission. Two of the three pads were reclaimed and seeded in the spring of 2005, however, little vegetation is currently growing on these sites. The noxious weeds, whitetop, Russian knapweed and cheatgrass are known to occur in the vicinity,

Environmental Consequences: Surface-disturbing activities provide an opportunity for the invasion and establishment of noxious weeds, particularly when noxious weeds are already present in the vicinity.

Mitigation: The APDs and COAs include measures to re-vegetate the well site with native perennial grasses and shrubs. The project proponent will adhere to the specified seed mix and will continue with reclamation activities, including reseeding if necessary, until BLM's interim reclamation objectives are achieved as outlined in the 1999 Oil and Gas Development FSEIS. In addition, a COA is attached requiring the operator to monitor for the presence of any Garfield County or State-listed noxious weeds at least once each year during the growing season for the life of the wells. Any noxious weeds found in the areas of surface disturbance will be promptly treated and controlled. A Pesticide Use Proposal must be approved by BLM prior to commencing any herbicide spraying.

MIGRATORY BIRDS

Affected Environment:

Vegetation adjacent to the 3 existing well pad sites consists mainly of small scattered juniper and salt desert shrub. The well pads themselves were reseeded in the spring of 2005 and have minimal vegetative cover. Given the mix of vegetation in the area, the project site provides nesting and foraging habitat for a variety of migratory bird species. A few species found on the U. S. Fish and Wildlife Service's Birds of Conservation Concern list may be present. Within the pinyon-juniper woodlands, the gray vireo, black-throated gray warbler, and pinyon jay may reside. No raptors are known to nest near any of the 3 existing well pads. A red-tailed hawk nest is located within ½ mile of the northern well pad. Red-tails and other raptors likely forage in the vicinity of the existing well pads.

Environmental Consequences/Mitigation:

The proposed action will involve redisturbance of 3 existing well pads. A total of approximately 4.9 acres will be redisturbed to accommodate new directional wells. The proposed action will result in no new losses of nesting, breeding, roosting, perching, and foraging habitat for the species noted above. It is likely that during construction activities, individual birds will be displaced to adjacent habitats due to noise and human presence. Limited public access into the area due to private surface ownership will reduce some indirect impacts associated with human

use. Despite the impacts to individual birds, it is unlikely that whole species or populations will be severely impacted by implementation of the proposed action. Raptors should not be negatively affected as upland foraging habitat is plentiful in the area.

NATIVE AMERICAN RELIGIOUS CONCERNS

Affected Environment: At present, no Native American concerns are known by the GSFO within the project area and none were identified during the 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: 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.

Mitigation: Same as cultural section.

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.

No special status plant or wildlife inventories have been conducted for these well locations as they were originally fee-fee well locations permitted by the Colorado Oil and Gas Commission. The general project area constitutes potential habitat for the Federal candidate plant DeBeque phacelia (*Phacelia submutica*), and for the BLM Sensitive plants DeBeque milkvetch (*Astragalus debequaeus*), and Rocky Mountain thistle (*Cirsium perplexans*). The area provides no other habitat for any federal or state listed plants or animals, or other BLM sensitive species.

Environmental Consequences/Mitigation: As long as the surface disturbance required to drill these additional wells does not exceed the area that was previously disturbed during the construction of the original wells, there should be no further impacts to any special status plants. If any additional ground disturbance extends beyond the existing pad footprints, additional special status plant inventories would be required.

The action would have “No Effect” to any listed animal species given the lack of suitable habitat and occurrence records.

Analysis on the Public Land Health Standard for Threatened & Endangered species: Given that the 3 well pads already exist, the proposed action should not result in any further impacts to special status species, and therefore, would not contribute toward a failure to meet Standard 4 for Special Status, Threatened & Endangered Species.

WASTES, HAZARDOUS OR SOLID

Affected Environment: 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 the Colorado River Watershed located west of Parachute, Colorado. The GM_343_11 pad is located between two ephemeral drainages that drain into the Diamond Ditch and subsequently into the Colorado River. The GV3_11 pad lies approximately 150 feet south-west of the southern drainage south of the GM_343_11 pad. The GM44_11 pad lies approximately 70 feet south of an unnamed ephemeral drainage to the Diamond Ditch and drains into the perennial Colorado River. This section of the Colorado River is classified as aquatic life warm class 1, recreation class 1a, water supply 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:

Surface Water

Pad re-construction would result in the removal of vegetation and disturbance of soils that would increase sediment and salinity in surface water in the area. There is little risk that the impact to surface waters would be greater than anticipated should a high intensity thunder storm hit immediately following the surface disturbing activity and before mitigating measures are in place. With mitigation (see soils section) to control runoff water the increase in the amount of sediment in surface waters would likely be minimal.

Negative impacts to surface waters, with associated mitigation, would be expected to be minimal following the initial disturbance. Mitigating activity should be initiated prior to and during (not after) construction to avoid unnecessary degradation of surface water quality. There would not likely be long term negative impacts to surface water quality from mitigated increases in sediment coming from working surfaces.

- Due to the size of the disturbance (likely greater than 5 acres) Williams Production RMT will consult with the State of Colorado Water Quality Control Division (for stormwater permits) prior to commencing construction activities related with said permits within the

proposed action area. Written documentation to the Authorized Officer is required to indicate that appropriate permits have been obtained or are not required by the permitting agency.

- In addition, as the proposed action and connected activities would cross intermittent and ephemeral drainages, Williams Production RMT will consult with the Army Corps of Engineers (for 404 permits) prior to commencing construction activities related with said permits within the proposed action area. Written documentation to the Authorized Officer is required to indicate that appropriate permits have been obtained or are not required by the permitting agency.

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.

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

Affected Environment: The Proposed Action and No Action are 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' wilderness proposal 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 GM-343-11 and GM-44-11 pad location lie on one soil map unit known as the Torriorthents-Camborthids-Rock outcrop complex (steep). This unit is highly variable. Torriorthents soils are described as shallow and moderately deep while Camborthids are shallow to deep soils. The rock outcrop is comprised of Mesa Verde sandstone and Wasatch shale with small pockets of limestone and exposed gypsum. Erosion hazards for this complex are moderate to severe depending on slope. This complex is used for grazing, wildlife habitat (mule deer winter range), and recreation.

The GV-3-11 pad is located on Arvada loam, (6 to 20% slopes) a deep well drained loam found on fans and high terraces. Erosion hazard is described as being severe with surface runoff characteristics being described as moderate. Water holding capacity of this soil is high. Typical uses for this soil include wildlife habitat and limited grazing use.

Environmental Consequences/Mitigation: There would be some loss of soil, some loss of soil productivity, and an increase in sedimentation resulting from construction of the road. The extent of these impacts on soils would not be great and would be expected to last for a relatively short period of time. However, due to the erodible and fragile nature of the soils the proponent will be subject to the following mitigation in order to mitigate impacts to surface water quality and soils.

- The road will be crowned, ditched, graveled, and have properly spaced water bars in order to divert overland flow from off of the road. The operator will be responsible for appropriate road maintenance that would minimize soil loss as per BLM Gold Book standards.
- 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. Destroyed, damaged or inoperable culverts will be removed from the GAP area and disposed of by Williams Production RMT.
- 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). Culverts should be inspected annually to ensure they are functioning properly and promptly maintained (e.g. remove any debris causing blockage) or replaced when necessary.

In general, the authorization would require full compliance with BLM directives and stipulations that relate to protection of soils via stormwater and section 404 permitting in order to maintain soil productivity and minimize soil erosion, and reclamation of surface disturbance following construction.

Analysis on the Public Land Health Standard for upland soils: The proposed action would not likely prevent health standards from being met provided that mandatory design features are implemented.

VEGETATION (includes an analysis on Standard 3)

Affected Environment: Vegetation within the general project area consists of sparse pinyon-juniper woodlands and salt desert shrublands. Since the 3 existing pads were drilled and

reclaimed less than a year ago, there is very little existing vegetation on the pads other than some annual weeds and a small amount of shadscale bushes.

Environmental Consequences/Mitigation: The planned disturbed areas will lie entirely within the surface disturbance of the original pads. The proposed action would result in a short-term loss of vegetation in the temporary disturbed areas and a long-term loss of vegetation on the portions of the pads needed for ongoing production activities.

Mitigation: With implementation of reclamation practices, including reseeding the site with native grasses and shrubs and promptly controlling noxious weeds, establishment of desirable vegetation on the sites can be expected within 2-3 years following completion of drilling. Monitoring of the reclamation would occur as identified in COAs. The pad will be fenced to exclude livestock grazing until the seeded species are established and firmly rooted and at least 50% of seeded species are reproducing. (This will require a minimum of two growing seasons but may take longer depending on site-specific conditions.)

Analysis on the Public Land Health Standard for plant and animal communities (partial, see also Wildlife, Aquatic and Wildlife, Terrestrial): The lands included in the project were part of the Rifle West Land Health Assessment conducted in 2004. The Report and Determination Document are awaiting signature. However, the preliminary findings indicate that portions of the landscape are not meeting standards due to dominance by cheatgrass, hedged and decadent sagebrush, encroachment of pinyon-juniper into sagebrush parks and fragmentation of the landscape due to oil and gas development.

The proposed action would result in no additional loss of vegetation and would not contribute to a further decline in land health. Proper and timely reclamation may actually create a slight trend toward meeting the standard on a localized scale.

WILDLIFE, AQUATIC (includes an analysis on Standard 3)

Affected Environment: The 3 existing well pads are not located directly near any perennial water sources capable of harboring aquatic wildlife. However, all 3 well pads are within 1 mile of both Parachute Creek and the Colorado River. Both of these waters contain a diverse assemblage of fishes and aquatic insects.

Environmental Consequences/Mitigation: Given that the well pads already exist, minimal new disturbance to aquatic wildlife should result from the proposed action. It is possible that until reseeding takes place erosion of sediments could occur. However, the pads are on relatively flat ground with minimal cuts and fills which should minimize erosion and sedimentation impacts.

Analysis on the Public Land Health Standard for plant and animal communities (partial, see also Vegetation and Wildlife, Terrestrial): If timely and successful pad reclamation and reseeding is conducted, the proposed action should have no further bearing on the watersheds ability to meet Standard 3 for aquatic wildlife.

WILDLIFE, TERRESTRIAL (includes an analysis on Standard 3)

Affected Environment: The 3 well pads already exist and will be redisturbed to accommodate new directional wells. Vegetation in the area provides habitat for a variety of big game, small game, and non-game mammals, birds, and reptiles. The area is mapped as crucial big game winter range.

Environmental Consequences/Mitigation: General impacts (short term, long term, and cumulative) to terrestrial wildlife were adequately addressed in the 1999 FSEIS. Given that the 3 well pads already exist, no new habitat loss will result. Pad reconstruction, drilling, and completion activities will likely displace animals away from the area due to human presence and noise. The big game winter timing limitation will eliminate impacts to wintering animals.

Standard measures are incorporated into the APD along with other measures (i.e., automatic well reporting, and reclamation) to conform to the FSEIS that will help to mitigate wildlife impacts. Public access and use of the roads for all the proposed well sites will be prevented due to controlled access on private lands. This will minimize disturbance and reduce effective habitat loss.

Analysis on the Public Land Health Standard for plant and animal communities (partial, see also Vegetation and Wildlife, Aquatic): If timely and successful pad reclamation and reseeding is conducted, the proposed action should have no further bearing on the watersheds ability to meet Standard 3 for terrestrial wildlife.

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

The 3 well pads already exist. In addition no new road or pipeline construction is required under the proposed action. As such, the proposed action will not be additive and the road and well density thresholds will not be exceeded. In the event a new Geographical Area Plan (GAAP) is initiated for the area, these wells and all associated roads will be included in the GAP road and well pad density analysis. Based on the analysis, it is possible that mitigation will be sought to offset habitat loss and fragmentation.

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

VISUAL RESOURCES

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

The protection of VRM classes, landscape character and scenic quality on private and public lands and split estate is discussed on pages 3-41 through 3-45 of the FSEIS. VRM classes shown for non-public lands are an indication of the visual values for those lands, and those values are only protected by landowner discretion. The impacts of development are discussed on pages 4-49 through 4-54 of the FSEIS. The proposed action is on private surface and will not affect any of the key viewing areas or viewsheds described in the FSEIS. In particular, the proposed action will not be seen from the key viewing areas of the 1-70 corridor, county roads, or the towns of Parachute and Battlement Mesa. However, the existing pads and the proposed action are directly adjacent to several nearby residents.

Environmental Consequences/Mitigation: The proposed action will create additional short and long term impacts within the existing landscape. Currently the existing landscape is best described as private rural development (homes (3), barns, outbuildings, fences, corral, etc.) with industrial development (well pads and facilities) immediately adjacent to and intermixed with residents. The proposed action will dominate the area during drilling and completion activities. Long term impacts to residents will occur due to additional facilities. While these existing well pads on private surface are not currently visible from I-70 (KOP), the level of disturbance would not meet VRM Class II objectives as viewed from the access road or from nearby residences.

While BLM recommendations are at the land owners discretion on private surface every effort should be made to reduce the impacts to I-70 and to nearby residents. The following mitigation will help reduce long term contrasts within the landscape.

Mitigation: All above ground facilities will be painted a standard flat environmental color to blend in with the surrounding landscape.

In order to reduce long term impacts to adjacent residents from GM 33-11, GM333-11, GM 433-11, GM 533-11, and GM 434-11, 4-plex production units will be utilized and moved behind rock outcrop as much as possible in order to screen viewing from nearby residents.

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			
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

PALEONTOLOGY

Affected Environment: The proposed pad and access road fall within a Condition I area for possible sites of paleontological or scientific value. However, all new pad will be constructed on existing disturbance from previous well drilling activity.

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.

GEOLOGY AND MINERALS

Affected Environment/Environmental Consequences/Mitigation:

The target gas zones for the proposed directional wells in this region are generally deep sands within the Williams Fork Formation. The shallower Wasatch G sands may contain some gas but are generally not an economic target at present. All of the coal zones are generally too deep for currently economic underground mining. The production casing should be cemented to the extent that it should isolate the formations and protect all potentially producible gas zones.

Groundwater

This action is not projected to have any noticeable impacts on groundwater resources within the project area. There are numerous water wells within the region. The wells generally range from 100' to 300' in depth. The aquifers are likely the alluvial gravel deposits overlying the Wasatch and the bedrock water zones in the lenticular sands in the Wasatch. However, no "regional" continuous bedrock aquifer is known to be present. Any shallow groundwater zones encountered during drilling of the proposed wells should be properly protected and the presence of these zones reported to the BLM and COGCC.

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).

ACCESS AND TRANSPORTATION :

Environmental Consequences/Mitigation: Access to the three locations is on existing gravel roads on county roads and private roads.

Truck traffic related to lease development will be the heaviest during rig-up, completion activities, and the rig-move to the pad location. The proposed drilling and completion activities on the federal wells will likely commence in fall 2005.

CUMULATIVE IMPACTS SUMMARY: 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 have 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 per acre disturbance of the proposed action and of prior actions at these sites is about 0.6 acres per natural gas well.

The air quality analysis conducted in the 2004 Glenwood Springs Resource Management Plan Amendment for the Roan Plateau and Draft Environmental Impact Statement (DEIS) does assess the impacts to the air shed from oil and gas development within and around the Roan Plateau Planning Area. The proposed action addressed in this document, which could include well pad and/or road construction, well drilling and well completion work typical for oil and gas development, would not represent a significant increase in emissions relative to the emissions assumed in the 2004 DEIS.

INTERDISCIPLINARY REVIEW:

<u>Name</u>	<u>Title</u>	<u>Area of Responsibility</u>
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, Invasive, Non-native Species
Bruce Fowler	Geologist	Ground Water/Minerals
Jim Wilkinson	Geologist	Paleontology
Mike Kinser	Rangeland Management Specialist	Riparian
Marty O'Mara	Petroleum Engineer	Downhole Conditions of Approval
Brian Hopkins	Community Planner	Transportation, Recreation
Kay Hopkins	Outdoor Recreation Planner	Visual Resources
Mark Wimmer	Rangeland Management Specialist	Soil, Water and Air
Mike McGuire	Rangeland Management Specialist	Range

FONSI**CO-140-2005-112 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 Application for Permit to Drill: Boruch GM 534-11, Boruch GM 33-11, Boruch GM 434-11, Boruch GM 334-11, Boruch 34-11, Boruch GM 433-11, Boruch GM 533-11, and Boruch GM 333-11 on the existing GM 343-11, GV 3-11, and GM 44-11 pads with the attached 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 validates the rights granted with the federal oil and gas leases to develop the leasehold to provide commercial commodities of oil and gas.
2. The environmental impacts have been mitigated with measures included in the Surface Use Plan and the attached Conditions of Approval.

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

NAME OF PREPARER: Bill Barter, Natural Resource Specialist

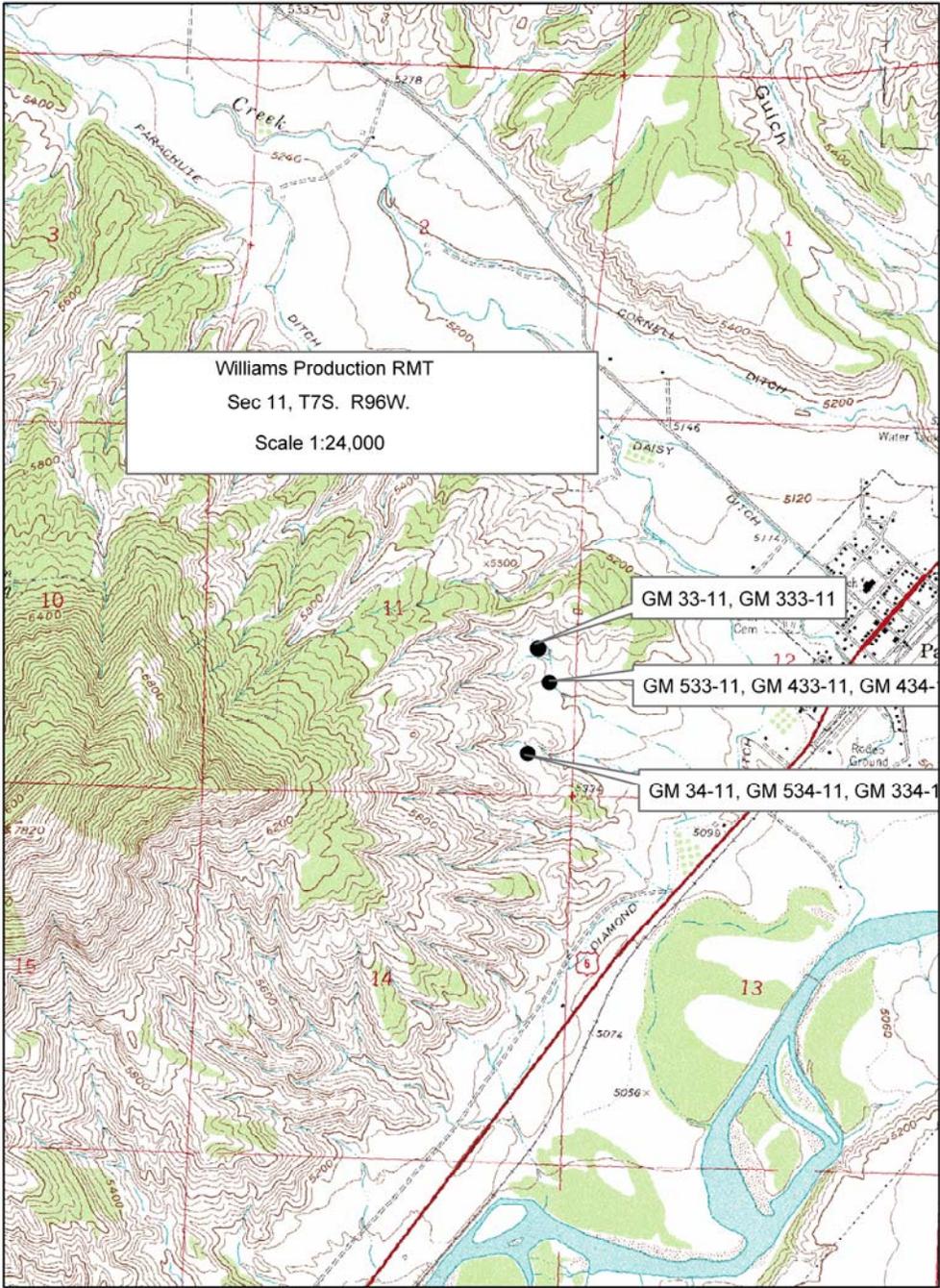
SIGNATURE OF AUTHORIZED OFFICIAL:


Authorized Officer

DATE SIGNED:

9-19-05

ATTACHMENTS: Map, Conditions of Approval



CONDITIONS OF APPROVAL
APPLICATION FOR PERMIT TO DRILL

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

Surface Location: **NESE Sec. 11, T07S, R96W**

<u>Name</u>	<u>No.</u>	<u>API No.</u>	<u>BH Location</u>	<u>Lease</u>	<u>CA No.</u>
Boruch	GM 33-11	05-045-10988	NWSE Sec 11, T07S, R96W	COC-27874	COC-50872
Boruch	GM 333-11	05-045-10989	NWSE Sec 11, T07S, R96W	COC-27874	COC-50872
Boruch	GM 433-11	05-045-10991	NWSE Sec 11, T07S, R96W	COC-27874	COC-50872
Boruch	GM 434-11	05-045-10990	SWSE Sec 11, T07S, R96W	COC-27874	COC-50872
Boruch	GM 533-11	05-045-10992	NWSE Sec 11, T07S, R96W	COC-27874	COC-50872

Surface Location: **SESE Sec. 11, T07S, R96W**

<u>Name</u>	<u>No.</u>	<u>API No.</u>	<u>BH Location</u>	<u>Lease</u>	<u>CA No.</u>
Boruch GM	34-11	05-045-Pend.	SWSE Sec 11, T07S, R96W	COC-27874	COC-50872
Boruch GM	334-11	05-045-Pend	SWSE Sec 11, T07S, R96W	COC-27874	COC-50872
Boruch GM	534-11	05-045-Pend	SWSE Sec 11, T07S, R96W	COC-27874	COC-50872

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.

Surface Use Conditions of Approval

1. No new surface disturbance beyond that planned for fee surface locations is permitted.
2. The paint color to be used on all surface facilities including any metal containment rings is Desert Tan (10yr 6/3).
3. Noxious Weeds: The operator shall monitor for the presence of any Garfield County or State-listed noxious weeds at least once each year during the growing season for the life of the wells. Any noxious weeds found in the areas of surface disturbance will be promptly treated and controlled. A Pesticide Use Proposal must be approved by BLM prior to commencing any herbicide spraying.
4. The operator is responsible for applying dust abatement measures as needed or directed by the Authorized Officer. The level and type of treatment (watering or application of various dust agents, surfactants and road surfacing material) may be changed in intensity and must be approved by the Authorized Officer. Dust control is needed to prevent heavy plumes of dust from road use that create safety problems and disperses heavy amounts of particulate matter on adjacent vegetation
5. Cultural Resources: When previously constructed well pad(s), access road(s), and other related improvements are expanded and used, cultural inventory is required to assess the potential adverse effects to historic properties. (Haas 2005)

Cultural Resource Education/Discovery Stipulation

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

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

If in connection with operations under this contract the project proponent, his contractors, subcontractors, or the employees of any of them, discovers, encounters or becomes aware of any objects or sites of cultural or paleontological value or scientific interest such as historic or prehistoric ruins, graves or grave markers, fossils, or artifacts, the proponent shall immediately suspend all operations in the vicinity of the cultural or paleontological resource and shall notify the BLM authorized officer of the findings (16 U.S.C. 470h-3, 36CFR800.112). Operations may resume at the discovery site upon receipt of written instructions and authorization by the authorized officer. Approval to proceed will be based upon evaluation of the resource. Evaluation shall be by a qualified professional selected by the authorized officer from a federal

agency insofar as practicable. When not practicable, the holder shall bear the cost of the services of a non-federal professional.

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

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

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

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

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

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

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

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

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

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

Seed Mix Application Practices

The surface owner may require the use of a grass seed mix that best works with his management plan for that area. The below described mix is approved if the owner has no other preference.

The seed mix and rates will be used on all disturbed surfaces, including pipelines unless otherwise noted in the specific APD:

<u>Species of Seed</u>	<u>Variety</u>	<u>Application Rate (lbs/acre)</u>
Winterfat		1.0
4-wing Saltbush	Rincon	2.0
Shadscale		2.0
Western wheatgrass	Arriba	3.0
Bluebunch wheatgrass	P7	3.0
Indian ricegrass	Paloma	2.0
<u>Galleta</u>	Viva	<u>1.0</u>
Total:		14.0 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 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.

The prepared seedbed will be seeded within 24 hours after completing dirt work unless a change is requested by the operator and approved by the Authorized Officer. Prepare the seedbed by contour cultivating 4-6 inches deep. 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.

Erosion Control Practices

The cut and fill slopes will be protected against rilling and erosion with measures such as 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 will be used on cuts and fill slopes to protect against soil erosion.

Topsoil Practices

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

Site Protection Practices

Reclaimed areas will be fenced to exclude livestock until seeded species have established. The Authorized Officer will approve the type of fencing. Fencing shall be to BLM standards

8. The operator will submit an annual reclamation report by December 31 to the Authorized Officer. The report will document compliance with all aspects of the reclamation objectives. The report will specify if the reclamation object

9. The road will be crowned, ditched, graveled, and have properly spaced water bars in order to divert overland flow from off of the road. The operator will be responsible for appropriate road maintenance that would minimize soil loss as per BLM Gold Book standards.

10. 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. Destroyed, damaged or inoperable culverts will be removed from the GAP area and disposed of by Williams Production RMT.

11. 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). Culverts should be inspected annually to ensure they are functioning properly and promptly maintained (e.g. remove any debris causing blockage) or replaced when necessary.

12. In general, the authorization would require full compliance with BLM directives and stipulations that relate to protection of soils via stormwater and section 404 permitting in order to maintain soil productivity and minimize soil erosion, and reclamation of surface disturbance following construction.

13. Due to the size of the disturbance (likely greater than 5 acres) Williams Production RMT will consult with the State of Colorado Water Quality Control Division (for stormwater permits) prior to commencing construction activities related with said permits within the proposed action

area. Written documentation to the Authorized Officer is required to indicate that appropriate permits have been obtained or are not required by the permitting agency.

14. In addition, as the proposed action and connected activities would cross intermittent and ephemeral drainages, Williams Production RMT will consult with the Army Corps of Engineers (for 404 permits) prior to commencing construction activities related with said permits within the proposed action area. Written documentation to the Authorized Officer is required to indicate that appropriate permits have been obtained or are not required by the permitting agency.

15. In order to reduce long term impacts to adjacent residents from GM 33-11, GM333-11, GM 433-11, GM 533-11, and GM 434-11, 4- plex production units will be utilized and moved behind rock outcrop as much as possible in order to screen viewing from nearby residents.

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