

**U.S. Department of the Interior
Bureau of Land Management
Glenwood Springs Field Office
50629 Highway 6 & 24
Glenwood Springs, CO 81601**

ENVIRONMENTAL ASSESSMENT

NUMBER: CO-140-2005-056 EA

CASEFILE NUMBER: Lease # COC-50128

PROJECT NAME: Application for Permit to Drill 1 Directional Well from Existing N9W Well Pad in Grass Mesa GAP (Benefiting program, Fluid Minerals 1310)

LEGAL DESCRIPTION:

HMU 9-13 Surface location: T7S, R93W, Sec 9, SE $\frac{1}{4}$ SW $\frac{1}{4}$, Sixth P.M.
(N9W Pad) Bottom Hole: T7S, R93W, Sec 9 SW $\frac{1}{4}$ SW $\frac{1}{4}$ (660' FSL, 660' FWL)
 Surface Owner: EnCana Oil and Gas (USA) Inc.
 Federal Lease: COC-50128

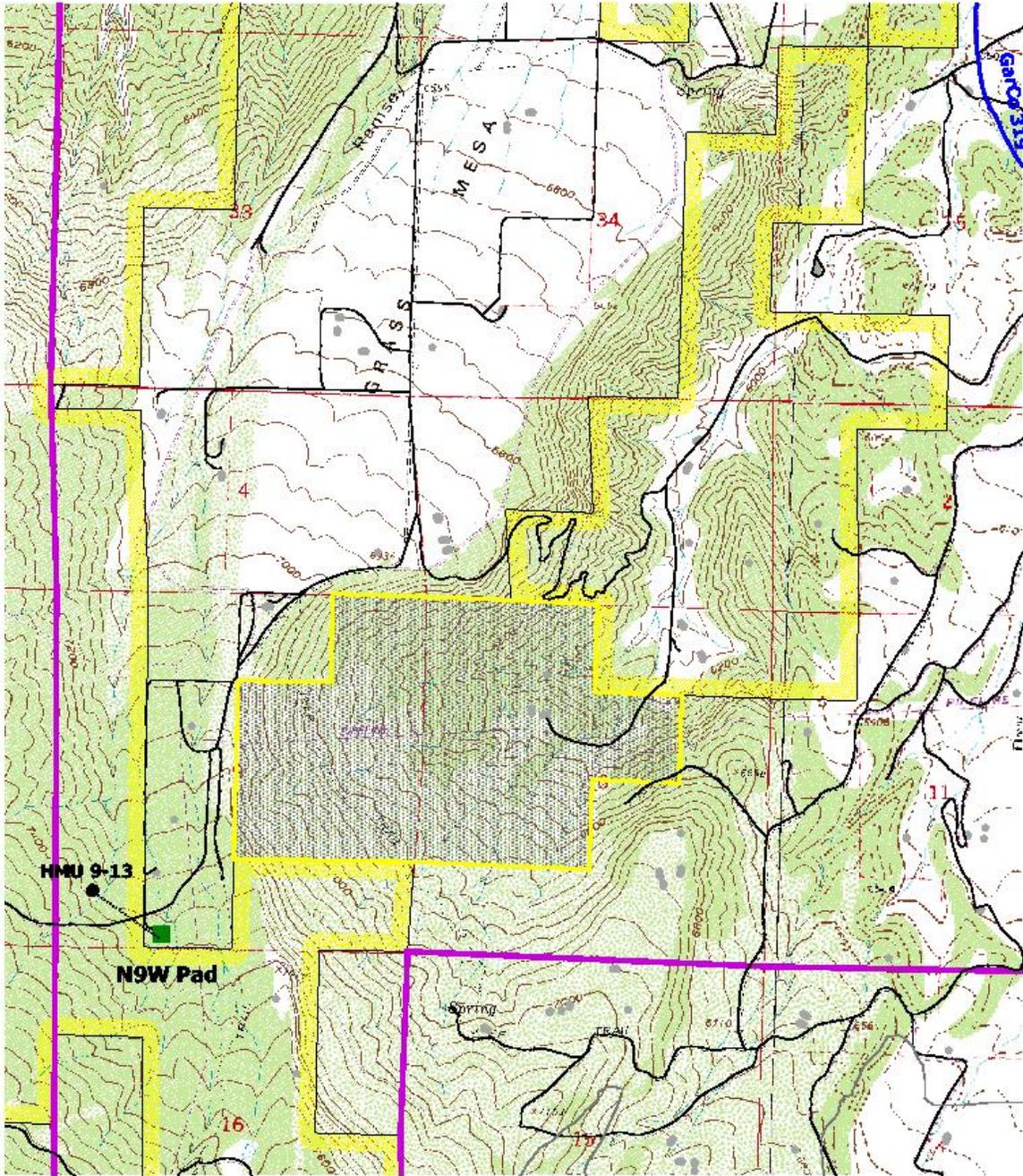
APPLICANT: EnCana Oil and Gas (USA) Inc.

DESCRIPTION OF PROPOSED ACTION AND ALTERNATIVES

Proposed Action: The proposed action is to directionally drill and develop 1 federal natural gas well and 1 fee well from the existing pipeyard which will be converted to the N9W well pad located on private land owned by EnCana in Lot 61 of the Grass Mesa Subdivision. No surface disturbance beyond the existing disturbed area is planned. Review of the Project Map can provide bottomhole location, access and ownership details for the well. No new road construction is proposed; road maintenance will be the operator's responsibility.

This specific pad location was not analyzed in the recently approved Grass Mesa GAP (11/04). However, the well and pad qualifies as GAP waiver as defined in Appendix B of the 1999 SEIS, since the location is pre-existing, lies along the road and no additional surface disturbance is planned.

The proposed action includes drilling and completion operations, installation of production facilities (pipeline, separator/dehydrator, water tank, etc.), production of natural gas, and intermediate and final reclamation measures. The Application for Permit to Drill (APD) includes the drilling program and a multi-point surface use and operations plan that describe details of well pad construction and interim reclamation. The proposed action will be implemented consistent with the oil and gas leases (listed above), federal regulations (43 CFR 3100), the Record of Decision and Resource Management Plan



EnCana's N9W Pad (HMU 9-13 well)

*T7S, R93W, Sec 9 SE¹/₄SW¹/₄ 6th PM
Garfield County, CO*

Surface Owner: EnCana



Scale 1 : 24,000

3/25/05

Amendment March 1999, and the operational measures included in the APD as well as the Conditions of Approval (COA) attached to the APD.

The N9W pad lies along the existing Grass Mesa Road system at the very southwestern corner of the subdivision. The pad, approximately 12 miles south of Rifle, Colorado, lies in mountain brush vegetative type dominated with oakbrush and serviceberry. The location comprises a total of 4.5 acres of existing surface disturbance which was created in 2003 when the site was constructed and used as a staging area and pipeyard for the O18 pipeline right-of-way running toward National Forest lands to the southwest. The gathering line system is in place - installed directly parallel to existing access roads crossing private lands

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. At this time the allotment addressed in this EA has not had a formal Land Health Assessment completed. As such, we are deferring from making a call on conformance with the Standards until such time as a formal Land Health Assessment is completed. The tentative schedule for a Land Health Assessment on this allotment is 2011. 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: As described in the FSEIS, approval of the APD will result in localized short-term increases in particulate matter, carbon monoxide, nitrogen dioxide, ozone and sulfur dioxide concentrations, but will be well below applicable ambient air quality standards. Emissions of particulate matter will be reduced through control of dust during construction and completion activities. Hazardous air pollutant concentrations will be well below standards and the related short-term and long-term cancer risks to well rig operators and nearby residents would be below significant levels. Though no significant, adverse impacts to air quality will result, it is recognized that some people will find the operations annoying and irritating. Those with certain chemical sensitivities or breathing difficulties may find the operations unhealthy. Completion activities may result on odors in the reserve pit.

Truck traffic during the initial rig-up, well completion and rig-move will likely produce high levels of dust in dry conditions without dust abatement. The operator intends to water the road and/or use magnesium chloride for dust abatement

Environmental Consequences/Mitigation:

The operator is responsible for applying dust abatement measures as needed or directed by the Authorized Officer. The level and type of treatment may be changed in intensity and must be approved by the Authorized Officer to control the dust such as from watering to application of various dust agents, surfactants and road surfacing material.

AREAS of CRITICAL ENVIRONMENTAL CONCERN, WILD AND SCENIC RIVERS and WILDERNESS

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

CULTURAL RESOURCES

Affected Environment: The Grass Mesa GAP EA (CO-140-2004-081EA) stipulated that cultural resource inventories would be required on all new well locations within the GAP; however the proposed location has been extensively disturbed during the construction of the O-18 pipeline. Therefore, no cultural resource inventory has been conducted for the existing well location. This action falls under environmental constraints precluding intensive Class III coverage according to the BLM/State Historic Preservation Office Protocol. 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 this well location.

- Previous 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.

Ten cultural inventories (GSFO # 591, 1092, 1175, 5400-12, 5402-17, 5403-5 & 5A, 5404-16, 5404-19, 5404-19, and 14503-1) have been conducted in or through this section without identifying any National Register of Historic Places eligible properties. Therefore, it is less likely that any cultural property was impacted by the previous 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 this well location.

Environmental Consequences/Mitigation: Several cultural resource inventories have been conducted within the section without finding significant cultural properties. Given the amount of work completed without finding significant resources it is unlikely that any cultural properties have been impacted by the previous disturbance.

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 EnCana 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:

Any addition work outside the existing disturbance will require a cultural resource inventory. 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.

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

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

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

FARMLANDS, PRIME AND UNIQUE

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

FLOODPLAINS, WETLANDS, RIPARIAN ZONES

Affected Environment: There will be no impacts to floodplains, riparian vegetation, or wetlands since these resources are not present within the area of proposed action.

Environmental Consequences/Mitigation: There would be no environmental consequences to floodplains, wetlands or riparian zones since these resources are not present.

Analysis on the Public Land Health Standard for riparian systems: Not Affected

INVASIVE, NON-NATIVE SPECIES

Affected Environment

No noxious weed surveys have been conducted at the site of the existing well pad, however, a variety of noxious weeds are known to occur in the vicinity of the project area.

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 grasses and shrubs and desirable, nonnative forbs. The project proponent will adhere to the specified seed mix and will continue with reclamation activities, including reseeding if necessary, until interim reclamation measures are achieved. In addition, a standard Condition of Approval is attached requiring the project proponent to 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 project area is comprised mainly of mixed mountain shrublands. Given this mix of vegetation, the project areas provide both foraging and nesting habitat for a variety of migratory birds. One species listed on the U.S. Fish and Wildlife Service’s Birds of Conservation Concern list may be present. Within the mixed mountain shrublands and oakbrush, Virginia’s warbler may occur.

No raptor nests occur in the immediate vicinity of the surface well pad. However, golden eagles, red-tailed hawks, and goshawks nest in the nearby area. It is likely that these and other raptors forage near the well pads.

Environmental Consequences/Mitigation: The proposed action will involve minimal new disturbance as the well pad already exists and will be used to drill new directional wells. Because the pad exists, new construction and continued production activities will have minimal additional effect on migratory birds or their habitat. It is very likely that during any pad reconstruction, drilling and completion activities individual birds will be displaced to adjacent habitats due to noise and human presence. Limited public access into the pad location will reduce some indirect impacts. Raptors should not be negatively affected as upland foraging habitat is plentiful in the area.

NATIVE AMERICAN RELIGIOUS CONCERNS

Affected Environment: The Ute Tribes were notified on August 11, 2004 of the Grass Mesa GAP. The Uintah and Ouray Band of the Ute Tribe responded by e-mail on September 9, 2004 that they would like to visit some of the sites when possible. That field trip remains to be completed. No information or concerns were received from the other two tribes. At present, no Native American concerns are known by the GSFO within the project area and none were identified during the inventories. The Ute tribe has in the past, and continues to claim the area as their ancestral homeland. If new data is disclosed, 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 EnCana and their subcontractors. A standard Education/Discovery Condition of Approval for Cultural Resource protection will be attached to the APD. See Cultural Resource Section.

THREATENED, ENDANGERED, AND SENSITIVE SPECIES (includes analysis on Standard 4)

Affected Environment: Since the existing pad location is on private land and did not involve federal minerals upon original construction/drilling, no Special Status species surveys were conducted prior to construction of the pad site.

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, no federal or state listed species or federal candidate or proposed species or their habitat are known to occur within the project area. The BLM Sensitive plant, *Penstemon harringtonii*, is known to occur within ½ mile of the project area and the project area is believed to contain some potential habitat for this species.

Environmental Consequences/Mitigation: No new disturbance will occur as the wells will be drilled from the existing well pad located on private land. Due to the lack of survey conducted prior to the site construction in 2003 and with no additional disturbance being planned, the proposed action will have “No Effect” to any listed species or their habitats. Since no additional disturbance is planned, the proposed action will result in no further impact to BLM Sensitive plants.

Analysis on the Public Land Health Standard for Threatened & Endangered species: A formal land health assessment is not planned for completion in the project area until 2010. However, the proposed action should not affect the ability of the landscape to meet Standard 4 for special status species.

WASTES, HAZARDOUS OR SOLID

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

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

Affected Environment: Surface Water

Pad reconstruction would result in the disturbance of soils that would increase sediment and salinity in surface water in the area. There is some 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 measures to control runoff water in place, reestablishment of vegetation, and proper engineering of roads, the increase in the amount of sediment in surface waters would be minimized. Culverts in road crossings of drainages would be required to pass a 25 year 6 hour storm event and would be installed during no flow or low flow conditions. Water produced during drilling activity would be contained in an engineered pit on the pad site and hauled to a disposal facility.

Negative impacts to surface waters would be expected to be minor and last for the most part for 3 years following the initial disturbance. Mitigating activity should be initiated as quickly as possible following construction to avoid unnecessary degradation of surface water quality. There would be some minor long term negative impacts to surface water quality from an increase in sediment coming from working surfaces that would not be rehabilitated until the wells are no longer producing and facilities are removed and the area rehabilitated.

Ground Water

There are numerous water wells in the Grass Mesa area, the nearest about ¼ mile to the north (depth 180'). The wells are generally 100'-300' in depth. The aquifer is likely the unconsolidated surficial deposits overlying the Wasatch. Usable ground water may also occur in lenticular sands in the Wasatch. No "regional" continuous bedrock aquifer is known to be present.

Environmental Consequences/Mitigation:

Analysis on the Public Land Health Standard for water quality: A formal land health assessment is not planned for completion in the project area until 2010. Although a determination has not been formalized, there is no indication that the proposed action would prevent Standard 5 from being met.

Ground Water

The operator proposes to set and cement surface casing to 1500 feet, which is adequate for isolating and protecting all water zones which are currently being utilized. In addition, a COA would require cementing across any usable water zones encountered below the surface casing.

NON-CRITICAL ELEMENTS

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

SOILS (includes analysis on Standard 1)

Affected Environment: The proposed action involves an existing pad surface that initially was constructed in 2003 for a pipeyard/staging area related to the O18 pipeline. The site has not been reclaimed; it is partially surfaced with gravel.

Environmental Consequences/Mitigation: There would be very minor loss of soil, some loss of soil productivity, and an increase in sedimentation resulting from any reoccupation of the well pad. The extent of these impacts on soils would not be great and would be expected to last for a relatively short period of time. The proposed action includes measures to prevent direct placement of fill material in drainages, limits reclaimed slopes to 3:1, and to re-vegetate disturbed areas. Reclamation measures such as contouring disturbed areas, roughing the soil surface, re-vegetating, and controlling runoff would help to limit soil erosion. The loss of soil and sedimentation would occur after the construction phase for a short term of from 1 to 3 years until re-vegetation occurs. There would be some minor permanent loss of soil.

Analysis on the Public Land Health Standard for upland soils: A formal land health assessment is not planned for completion in the project area until 2010. Although a determination has not been formalized, there is no indication that the proposed action would prevent Standard 1 from being met.

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

Affected Environment: The N9W pad lies within the oakbrush/mixed mountain brush vegetative type. Although the existing site has not been reclaimed, reclamation potential on this site should be excellent judging by the soils on the site, the amount of moisture the site receives, and results of previous reclamation in the vicinity, particularly within the mountain brush community.

Environmental Consequences/Mitigation: The planned reserve pit construction will lie within the original surface disturbance of the site. The proposed action would result in a long-term loss of vegetation on the portions of the pad needed for production activities. With implementation of reclamation practices identified in the COAs, establishment of desirable herbaceous vegetation can be expected within 1-3 years of completion of drilling activities. Re-establishment of shrubs may require 5-10 years or more. 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): A formal Land Health Assessment is not planned for completion in the project area until 2010. Although a determination has not been formalized, assuming proper, timely well pad reclamation, the proposed action should not result in a failure of the area to meet Standard 3 for healthy plant communities.

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

Affected Environment: The existing N9W pad is not located near any perennial waters. Ramsey Gulch is located near the existing well pad but is ephemeral and only carries water during snowmelt and thunderstorm events. As such, no aquatic wildlife is found in the project vicinity.

Environmental Consequences/Mitigation:

It is likely that site-specific erosion potential will be increased due to clearing of the well pad to accommodate new wells. This will be the case until such time as adequate vegetation establishment is obtained on reclaimed portions of well pad. Increased sediment can reduce aquatic insect productivity as streams become silted and clean gravels and cobbles are covered. Sediment that ultimately reaches the Colorado River will have no impacts to fisheries as sediment levels are projected to be well within the

background levels for the Colorado River and minor potential increases in sediment would be undetectable.

Analysis on the Public Land Health Standard for plant and animal communities (partial, see also Vegetation and Wildlife, Terrestrial): A formal Land Health Assessment is not planned for completion in the project area until 2010. Although a determination has not been formalized, assuming proper, timely well pad reclamation, the proposed action should result in minimal effects to aquatic wildlife and will have no negative effects on the ability to maintain or meet Standard 3 for aquatic wildlife.

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

Affected Environment: The well pad and access roads are located in mountain brush vegetation with sagebrush flats surrounded by pinon-juniper habitat and a relatively productive understory of grasses and forbs. The Big Game Winter Habitat Timing Limitation (TL-1) is stipulated on the nearby Federal lease for the downhole location in federal mineral estate. However, because the surface locations of these pads are on private land, there is no specific language or legal description identifying the private well pad as binding to this timing limitation. The 5 month winter timing limitation on the BLM Grass Mesa Road would be applicable for that route which would affect the drilling and completion schedule for the N9W wells and would provide for winter solace for resident big game.

In addition to big game, a variety of small game and non-game wildlife, and birds are found in the vicinity of these proposed wells. General impacts (short term, long term, and cumulative) to terrestrial wildlife were adequately addressed in 1999 FSEIS. At this time a site-specific habitat assessment has not been conducted to determine the quality of the habitat. However, based on diversity of habitats and relatively undisturbed nature of the area, the habitat is considered to be very high quality.

Environmental Consequences/Mitigation: 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): A formal Land Health Assessment is not planned for completion until 2010. Since the proposed action calls for the use of existing surface locations, the action should result in no further deterioration of the ability of the landscape to maintain or meet Standard 3 for terrestrial wildlife species. Proper and timely reclamation will help to minimize the potential failure to meet this Standard.

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

The road and well density thresholds will not be exceeded via implementation of the proposed action, as no new surface locations will be constructed. As such, offsite or replacement mitigation measures to

reduce impacts to wildlife are not currently being considered. However, as future activity increases in the area, it is possible that mitigation will be sought to offset habitat loss and fragmentation. Cumulative impacts will be monitored over time and as future development increases mitigation opportunities will be identified and pursued.

OTHER NON-CRITICAL ELEMENTS:

ACCESS AND TRANSPORTATION

Environmental Consequences/Mitigation: Existing road access to the pad is through privately owned lands with no legal public access. Truck traffic will be the heaviest during rig-up, completion activities, and the rig-move to the next location. The proposed drilling and completion activities on the federal well will likely commence in spring, 2005.

GEOLOGY AND MINERALS

Affected Environment/Environmental Consequences/Mitigation: The target gas zones for the proposed directional wells are sands within the middle and lower part of the Williams Fork Formation. The shallower Wasatch G sands are not known to have gas potential in this area. The wells will reach total depth just below top of Rollins Sandstone (base of Williams Fork). All coal zones are too deep for underground mining. The operator proposes to cement the production casing from total depth to 200' above the top of the Williams Fork, which would isolate the gas-producing Williams Fork from other formations and zones.

HYDROCARBON ODORS

Affected Environment: A completion or frac pit was indicated in the APD survey package for the N9W pad. The initial well being drilled on the pad was permitted by COGCC; this permit initially authorized the frac pit construction by the operator. Knowing that the frac pit exists while the well pad lies less than ½ mile of nearby residence, there is concern (initially addressed on the Grass Mesa GAP) regarding hydrocarbon odors emanating from the frac pit.

Environmental Consequences: While no quantitative assessment has been completed to document the actual impacts of odors, frac pits and volatile organic compounds (VOC) combustors are thought to be the primary cause of these odors. Frac pits are generally used to store the relatively large amount (20,000 bbl) of fluids used in the "stack" fracking process, to reduce frac tank truck traffic typically used in the completion process, to expedite the time it takes to finish the completion process by recycling and reusing the frac fluids, but can be a source of odors when compared to reserve pits. Based on homeowner feedback, hydrocarbon odor within the Grass Mesa area is strongest at night, when night-cooling downwind breezes cause hydrocarbon fumes from nearby pad locations to drift into private residences.

Mitigation: To alleviate any odor impacts to nearby residence associated with the use of the frac pit on the N9W pad, operator will remove all fluids contained in the frac pit within 7 days of finishing the completion work on the wells. EnCana will continue using VOC combustors to help control those odors.

NOISE:

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

PALEONTOLOGY

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

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

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

VISUAL RESOURCES

Affected Environment: The existing N9W well pad is located in an area classified as VRM Class III in the 1984 Resource Management Plan. The objective of this class is to partially retain the existing character of the landscape. The level of change to the characteristic landscape should be moderate. Management activities may attract attention but should not dominate the view of the casual observer. Changes should repeat the basic elements found in the predominant natural features of the characteristic landscape.

The protection of VRM classes, landscape character and scenic quality on private lands and split estate is discussed on pages 3-41 through 3-45 of the FSEIS. The impacts of development are also discussed on pages 4-49 through 4-54 of the FSEIS. The proposed action will not affect any of the key viewing areas or viewsheds described in the FSEIS. In particular, the proposed action will not be seen from the key viewing areas of the 1-70 corridor or the town of Rifle.

Environmental Consequences/Mitigation: The proposed action is likely to lengthen the long term visual modifications due to the reconfiguration of the existing well pad where removal of mountain brush species has previously occurred. The location lies within dense vegetation and creates contrast in color, line, shape and texture. Large cut and fills also create contrast by introducing new colors, shapes and forms into the existing landscape. Interim reclamation of the well pad with seeded shrub and grass species would reduce the contrast after two to three growing seasons. After completion and reclamation, long term impacts are expected due to the removal of vegetation and the presence of production facilities.

The production facilities to be located on the pad will be painted conforming environmental colors as specified in the COAs or lease terms. The well facilities including the metal containment ring will be painted Shale Green, based on on-site recommendations. Efforts should be made to leave as much existing vegetation as possible to screen the excavated disturbance. The facilities should be placed against the cut side of the pad, where feasible.

For the following elements, those brought forward for analysis will be formatted as shown above.

Non-Critical Element	NA or Not Present	Applicable or Present, No Impact	Applicable & Present and Brought Forward for Analysis
Travel/Access			X
Cadastral Survey	X		

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

CUMULATIVE IMPACTS SUMMARY:

The analysis of the 1999 FSEIS was based on a Reasonable Foreseeable Development (RFD) Scenario of 1200 additional wells in Region 4. Of this estimated number of wells, 230 have been expected to occur on federal lands, outside the NOSR Production Area. Since the completion of the 1999 FEIS the number of wells analyzed in subsequent environmental assessments and associated Application for Permits to Drill approved have not exceeded 230. An average disturbance of 3.4 acres per well or 1,020 acres from Federal wells was used in the document for identification of future impacts. The FSEIS analysis was based on a reasonably foreseeable development scenario, including the numbers of wells, well spacing, equipment necessary, and assumed emission rates. Since completion of the FSEIS, the majority of new wells have been drilled directionally, from existing well locations so the average disturbance per well is much less than expected. Federal well surface densities have not gone lower than one well per 40 acre, although 10 acre down hole spacing densities have been approved in many areas. In addition, the most active operators have voluntarily installed condensers at new facilities where new wells have been drilled. This action condenses out and captures the volatile organic compounds (VOCs) that might otherwise escape to the atmosphere. This is resulting in lower potential air quality impacts than assumed in the FSEIS analysis. Thus, the projected impacts for the proposed action of this environmental assessment are still within the scope of the analysis made in the FSEIS for numbers of wells and acres impacted for cumulative effects.

PERSONS / AGENCIES CONSULTED:

RuthAnn Morss, Permit Agent, EnCana Oil & Gas (USA) Inc.
Ray Hayden, Construction Foreman, EnCana Oil & Gas (USA) Inc.

INTERDISCIPLINARY REVIEW:

<u>Name</u>	<u>Title</u>	<u>Area of Responsibility</u>
Jim Byers	Natural Resource Specialist	Team Leader
Cheryl Harrison	Archaeologist	Cultural Resources, Native American Religious Concerns
Tom Fresques	Wildlife Biologist	Terrestrial & Aquatic Wildlife, Special Status Wildlife
Carla Scheck	Ecologist	Special Status Plants, Vegetation, Noxious Weeds

Bruce Fowler
Jim Wilkinson
Mike Kinser
Wayne Bankert
Kay Hopkins
Mark Wimmer
Mike McGuire

Geologist
Geologist
Rangeland Management Specialist
Petroleum Engineer
Outdoor Recreation Planner
Rangeland Management Specialist
Rangeland Management Specialist

Ground Water/Minerals
Paleontology
Riparian
Downhole Conditions of Approval
Visual Resources, ACEC's, Wilderness
Soil, Water and Air
Range

FONSI

CO-140-2005-056 EA

EnCana Oil & Gas (USA) Inc. Application for Permit to Drill HMU 9-13 Directional Well on Existing N9W Well Pad

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

DECISION RECORD

DECISION: It is my decision to approve the Application for Permit to Drill HMU 9-13 directional well on the existing N9W pad 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.

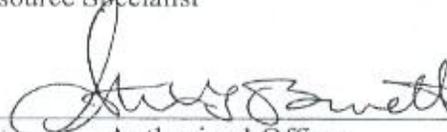
RATIONALE:

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: Jim Byers, Natural Resource Specialist

SIGNATURE OF AUTHORIZED OFFICIAL:


Authorized Officer

DATE SIGNED:

APR 22 2005

CONDITIONS OF APPROVAL
APPLICATION FOR PERMIT TO DRILL

Company/Operator: **EnCana Oil & Gas (USA), Inc.**

PAD	N9W	Location	SESW Sec 9, T07S, R93W	
Well Name	Well No.	API No.	Bottom Hole Location	Lease
HMU	9-13 (N9W)		SWSW Sec 9 T07S, 93W	COC-50128

NOTIFICATION REQUIREMENTS

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

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

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

Please contact Marty O’Mara (970) 947-2825 of the Glenwood Springs field office at least 24 hours prior to spud.

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

**DOWNHOLE CONDITIONS OF APPROVAL FOR NOTICE TO DRILL
HMU (N9W) WELL PAD**

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

<u>Well No.</u>	<u>Minimum TOC</u>	
	<u>MD</u>	<u>TVD</u>
9-19 (N9W)	6212'	6100'

2. A cement bond log (CBL) will be run from the production casing shoe to TOC and shall be utilized to determine the bond quality for the production casing.
3. Any usable water zones encountered below the surface casing shall be isolated and or protected by cementing across the zone. The minimum requirement is to cement from 50 feet above to 50 feet below each usable water zone encountered.
4. Open hole logs (PEX) shall be run in the surface section of the hole to determine shallow gas and waters. This COA is necessary only for the first well drilled on a pad.
5. The PEX open-hole log shall be run from TD to surface casing in at least one of the wells on the pad.

REGULATORY REMINDERS

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

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

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

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

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

Section 102(b)(3) of the Federal Oil and Gas Royalty Management Act of 1982, as implemented by the applicable provisions of the operating regulations at Title 43 CFR 3162.4-1(c), requires that "not later than the 5th business day after any well begins production on which royalty is due anywhere on a lease site or allocated to a lease site, or resumes production in the case of a well which has been off production

for more than 90 days, the operator shall notify the authorized officer by letter or sundry notice, Form 3160-5, or orally to be followed by a letter or sundry notice, of the date on which such production has begun or resumed."

If you fail to comply with this requirement in the manner and time allowed, you shall be liable for a civil penalty of up to \$10,000 per violation for each day such violation continues, not to exceed a maximum of 20 days. See Section 109(c)(3) of the Federal Oil and Gas Royalty Management Act of 1982 and the implementing regulations at Title 43 CFR 3162.4-1(b)(5)(ii).

In the event after-hours approval or notification is necessary, please contact one of the following individuals:

Marty O'Mara Petroleum Engineer	C: 970.319.5837 BLM Fax: 970.947.2829	W: 970.947.2825
Carol Snyder Petroleum Engineering Tech.	H: 970.255.9339 C: 970.216.6146	W: 970.244.3033
Ed Fancher Petroleum Engineering Tech.	H: 970.201.6792 C: 970.201.6792	W: 970.244.3039
Jim Byers Natural Resource Specialist	W: 970.947.2804	

BLM Fax: 970.244.3083

EPA'S LIST OF NONEXEMPT EXPLORATION AND PRODUCTION WASTES

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

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

SURFACE USE CONDITIONS OF APPROVAL

1. The paint color to be used on all surface facilities including the metal containment rings surrounding the tank battery, pipeline risers and gate installations is Shale Green (5Y 4/2).
2. To alleviate any odor impacts to nearby residence associated with the use of the frac pit on the N9W pad, operator will remove all fluids contained in the frac pit within 7 days of finishing the completion work on the wells. EnCana will continue using VOC combustors to help control those odors.
3. To help mitigate noise impacts from drilling to nearby residence(s), operator will use noise-reducing drill rig that is powered by electricity generated from diesel engine(s). A shallow hydraulic drill rig will also be allowed to drill the surface casing holes in advance of the primary drill rig referenced above. Sound barriers will be installed along north, south and east sides of pad to provide additional noise relief to nearby residence.
4. To avoid extending visual and hydrocarbon odor impacts from pits and soil loss from wind erosion related to excess material piles, operator is encouraged to drill, complete and conduct interim reclamation on all planned wells as portrayed on GAP Map in one drilling season. If operator chooses to drill wells on pad beyond one drilling season, then the reserve pit will be closed and interim pad reclamation will be completed prior to December 1 of each year.
5. 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.
6. Noxious weeds, which may be introduced due to soil disturbance associated with the proposed lease operations, will be treated by methods to be approved by the Authorized Officer. A Pesticide Use Plan (PUP) is required prior to use of any pesticide.
7. Remote monitoring will be conducted during the winter months to minimize site visits to pad locations and reduce traffic impacts to wintering big game wildlife. In addition, scheduled winter visits (those other than for emergency purposes), should be scheduled between 10 a.m. and 3 p.m. to further minimize disturbance to wintering big game wildlife.
8. 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.

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

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

10. 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

A specified seed mix designed to meet interim reclamation standards while providing forage and browse for wintering elk and deer using a mixture of shrub, grass and forb species shall be applied. The following 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>
Mountain brome		2.0
Thickspike wheatgrass	Critana	3.0
Western wheatgrass	Arriba	3.0
Bluebunch wheatgrass	Secar	3.0
Sainfoin		1.0
Small Burnet		1.0
Total:		13.0

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 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. No depressions will be left that would trap water and form ponds.

The prepared seedbed will be seeded within 24 hours after completing dirt work unless a change is requested by the operator and approved by the Authorized Officer. Prepare the seedbed by contour cultivating 4-6 inches deep. **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 ½ to 1 inch deep with a harrow or drag bar. All seeding will be conducted after September 1 and prior to ground frost. Spring seeding will be done after the frost leaves the ground and no later than May 15th. 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

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

Conditions of Approval for Road Maintenance and Use
along BLM Grass Mesa Road Easement Segment

1. Operator shall be responsible for continuous maintenance of the right-of-way covered by the grant including (but not limited to) the following procedures within the boundaries of the right-of-way:
 - a. road surface grading and graveling;
 - b. relief ditch, culvert and cattleguard cleaning
 - c. erosion control measures for all disturbed areas
 - d. drawing and cleaning of existing irrigation ditches
 - e. road closure in periods of excessive soil moisture to prevent rutting caused by vehicular traffic,
 - f. road and stabilization measures as required until final abandonment and rehabilitation;
 - g. weed control; and
 - h. dust abatement

2. The access road shall not be reconstructed beyond existing standards without prior approval of the authorized officer.

3. The use and maintenance of the existing road easement is subject to the following standards:

Width : 18-24' subgrade plus ditch, with curve widening (minimum 18 feet driving surface)
Grade : 8% with 12% pitches as dictated by terrain.
Min. Curve Radius: 100 feet
Surfacing : minimum 6" lift of pit run (minimum 3" material) with 6" of road base (3/4" minus or 1 1/2" minus) gravel surface
Drainage : Bar ditches (18-24 inches deep and 18-24 inches wide); culverts as required by authorized officer

4. The road shall not be utilized during periods when the soil is too wet to adequately support vehicles. If such vehicles create ruts in excess of 6 inches deep, the soils shall be deemed to be too wet to adequately support vehicles.

5. The holder shall not construct on public land any impediments to free public access unless otherwise instructed by the Authorized Officer.

All other Standard Stipulations documented in the Nonexclusive Road Easement and Right-of-Way Grant #C-36764 and Exhibits will apply and remain in full force and effect.