

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

ENVIRONMENTAL ASSESSMENT

NUMBER: CO140-2007-022 EA

CASEFILE NUMBER: Federal Leases COC56258 and COC69618

PROJECT NAME: Proposal to Drill 2 Exploratory Wells (HMU 32-3 and MCU 32-7) from a Proposed Federal Surface Location (G32E) in the Mamm Creek Field.

LOCATION: SW $\frac{1}{4}$ NE $\frac{1}{4}$, W $\frac{1}{2}$ SE $\frac{1}{4}$, Section 32, Township 7 South, Range 92 West, Sixth Principal Meridian and NW $\frac{1}{4}$ NE $\frac{1}{4}$, Section 5, Township 8 South, Range 92 West, Sixth Principal Meridian.

LEGAL DESCRIPTIONS:

Table 1. Surface and Bottomhole Locations of the Proposed Federal Wells		
<i>Proposed Wells</i>	<i>Surface Locations (Sec.32, T.7S., R.92W.)</i>	<i>Bottomhole Locations (Sec.32, T.7S., R.92W.)</i>
HMU 32-3	1543 feet FNL x 2139 feet FEL, SWNE	660 feet FNL x 1873 feet FWL, NENW
MCU 32-7	1558 feet FNL x 2151 feet FEL, SWNE	1980 feet FNL x 1875 feet FEL, SWNE

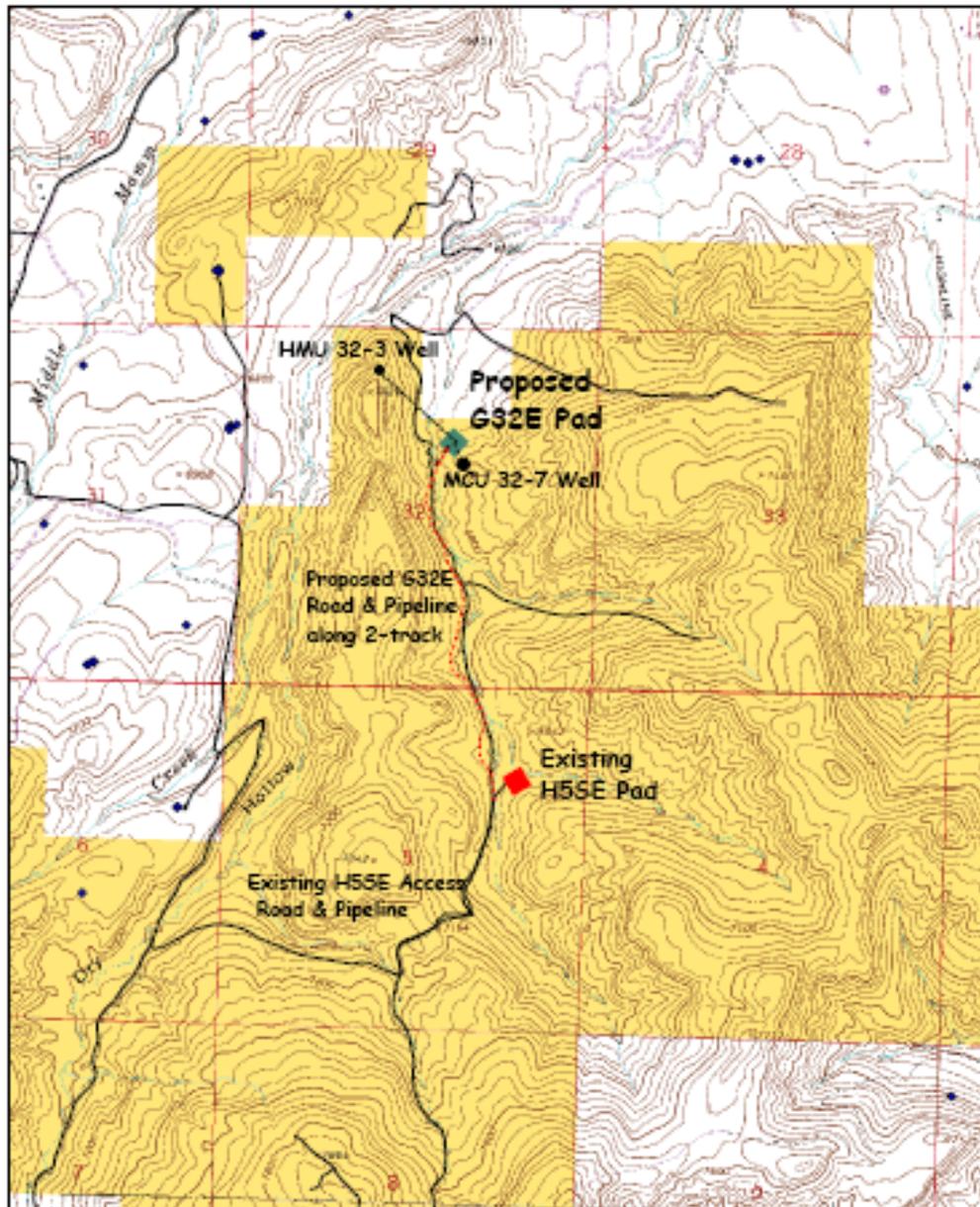
APPLICANT: EnCana Oil & Gas (USA) Inc. (“EnCana”)

DESCRIPTION OF THE PROPOSED ACTION AND NO ACTION ALTERNATIVE

Proposed Action: The proposed action is to drill and develop two Federal wells from a proposed Federal surface location in the Mamm Creek Field (Figure 1). These wells would be directionally drilled from this location into Federal mineral estate lying to the northwest and southeast.

The proposed G32E well pad would be situated in primarily sagebrush vegetative community on north-facing flats adjacent to an unnamed ephemeral drainage that feeds into Dry Hollow. Maximum cut proposed for the pad would be 32.2 feet at its southern edge and a maximum fill of 18.1 feet is proposed for its northern edge. All pad corners would be rounded to minimize surface disturbance and to avoid nearby gullies and draws. The construction of the well pad would result in approximately 4.9 acres of new surface disturbance which would be reduced to approximately 1.5 acres after interim reclamation.

To accommodate access to the proposed pad, approximately 5,590 feet (1.1 miles) of new road is also proposed. The road, which would be constructed with a 55-foot disturbance corridor, would have a finished surface width of between 16 and 20 feet. It would be constructed along or near an existing 2-track route to the pad. The road would be constructed to standards described in *Surface Operating Standards for Oil and Gas Exploration & Development* (USDI and USDA 2006). Construction of the road would result in approximately 7.1 acres of new surface disturbance, all of which would be on public lands. The public would not have motorized access to the area.



EnCana's Proposed G32E Pad in Mamm Creek Field

T7S R92W Sec 32, SWNE 6th P.M.

Garfield County, CO

Surface Owner: BLM

PROPOSED PAD - GREEN BLOCK
 PROPOSED ROAD/PIPELINE - RED DASH LINE



Scale 1: 24,000
 6/26/06

Figure 1. Proposed Pad Location and Road/Pipeline Alignment.

A proposed pipeline associated with the well would be buried in a trench along the entire length of the new access road right-of-way. The pipeline would connect to an existing line near the existing H5SE pad.

The proposed exploratory wells qualify for a GAP waiver as defined in Appendix B of the 1999 SEIS (BLM 1999a). It is the operator's intent to drill the proposed MCU 32-7 well to serve as an initial paying well for the Middleton Creek Unit.

The proposed action would include well drilling and completion operations, installation of production facilities, production of natural gas, and intermediate and final reclamation measures. The Application for Permit to Drill (APD) includes a drilling program and a multi-point surface use and operations plan that describe details of well pad construction and interim reclamation. The proposed action would be implemented consistent with the terms of the respective oil and gas lease(s), and with Conditions of Approval (COA) attached to the APD (Appendices A and B).

No Action Alternative: The proposed action involves Federal subsurface minerals that are encumbered with federal oil and gas leases, which grants the lessee a right to explore and develop the lease. Although BLM cannot deny the right to drill and develop the leasehold, individual APD(s) can be denied to prevent unnecessary and undue degradation. The no action alternative constitutes denial of the APD(s) associated with the proposed.

Under the no action alternative, therefore, none of the proposed developments described in the proposed action would take place. However, wells that are currently in production in the Mamm Creek field would continue to be the subject of operations and maintenance activities into the foreseeable future.

PURPOSE AND NEED FOR THE ACTION: The purpose of the action is to develop oil and gas resources on Federal Lease COC56258 and COC69618 consistent with existing Federal lease rights. The action is needed to increase the development of oil and gas resources for commercial marketing to the public.

SUMMARY OF LEASE STIPULATIONS: Federal Lease COC56258 was segregated by BLM Colorado State Office from the original Federal Lease COC43220 when the Hunter Mesa Unit was formed. Federal Lease COC69618 was further segregated from COC56258 when the Middleton Creek Unit was formed. Lease COC43220, initially signed in 1986, is currently held by production from other wells on this lease and carries the following stipulation that is applicable to the legal description of the proposed action:

- Timing Limitation to protect big game winter range from 1/16 - 4/29 with exception in any particular year

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

Name of Plan: Glenwood Springs Resource Management Plan (BLM 1984).

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

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

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

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

STANDARDS FOR PUBLIC LAND HEALTH: In January 1997, Colorado BLM approved the Standards for Public Land Health. The five standards cover upland soils, riparian systems, plant and animal communities, threatened and endangered species, and water quality. Standards describe conditions needed to sustain public land health and relate to all uses of the public lands. The environmental analysis must address whether the proposed action or alternatives being analyzed would result in impacts that would maintain, improve, or deteriorate land health conditions relative to these resources.

These analyses are conducted in relation to baseline conditions described in regional land health assessments (LHAs) completed by the BLM. At the present time, an LHA has not been completed for the study area. Therefore, the evaluation of impacts of the proposed action in relation to the standards will be conducted on the basis of site-specific, rather than regional, baseline conditions.

AFFECTED ENVIRONMENT AND ENVIRONMENTAL CONSEQUENCES

This section provides a description of the human and natural environmental resources that could be affected by the proposed action and no action alternative. In addition, the section presents comparative analyses of the direct and indirect consequences on the affected environment stemming from the implementation of the various actions.

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

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

Critical Elements

Air Quality

Affected Environment: The proposed action area (Garfield County) has been described as an attainment area under CAAQS and NAAQS (Colorado Ambient Air Quality Standards and National Ambient Air Quality Standards). An attainment area is an area where ambient air pollution amounts are determined to be below NAAQS standards.

Proposed Action:

Environmental Consequences: The Roan Plateau RMPA and EIS describe potential effects from oil and gas development (BLM 2006:4-26 to 4-37). Analysis was completed with regard to greenhouse gas emissions, a near-field and far-field analysis for carbon monoxide, particulate matter (PM₁₀ and PM_{2.5}), sulfur dioxide, hazardous air pollutants including: benzene, ethylbenzene, formaldehyde, hydrogen sulfide, toluene, and xylenes. Sulfur and nitrogen deposition analysis, acid neutralizing capacity, and

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

* Public Land Health Standard

visibility screening-level analysis were also completed in the Roan Plateau RMPA and EIS. Findings indicate that no adverse long-term effects would result under that plan. Since the proposed action is within the scope of the reasonable foreseeable development (RFD) scenario analyzed in that document, it is anticipated that the proposed action would be unlikely to have adverse effects on air quality.

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

No Action Alternative:

Environmental Consequences: Under the no action alternative there would be no dust generation and equipment emissions associated with road and pad construction and drilling activities.

Cultural Resources

Affected Environment: A Class III cultural resource inventory (GSFO# 5407-3) was conducted which encompassed the proposed well location, access road, and pipeline. No historic properties were identified that are eligible for listing on the National Register of Historic Places. Therefore, no formal consultation with the Colorado State Historic Preservation Officer (SHPO) was needed and a determination of “**No Historic Properties Affected**” was made in accordance with the National Historic Preservation Act, as amended (16 USC 470f), National BLM/SHPO Programmatic Agreement (1997), and Colorado Protocol (1998).

Proposed Action:

Environmental Consequences: Although there would be no direct impacts from the proposed action, indirect long-term cumulative impacts from increased access and personnel could result in a range of impacts to known and undiscovered cultural resources in the vicinity of the location. These impacts could range from illegal collection and excavation to vandalism.

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

No Action Alternative:

Environmental Consequences: The no action alternative should not result in impacts to cultural resources because access to this area would not be increased. Existing operations in the Mamm Creek field would remain subject to the Inadvertent Discovery clause of the National Historic Preservation Act (NHPA) which mandates the protection of cultural resources discovered subsequent to the initiation of development activities.

Invasive, Non-native Species

Affected Environment: The proposed pad lies within a sagebrush community. The access road and pipeline are located in a mixed mountain shrub-oakbrush community. Cheatgrass was present in the project area. No other weeds species were identified during surveys conducted in July 2006 by the BLM Energy Ecologist.

Proposed Action:

Environmental Consequences: Surface-disturbing activities provide a niche for the invasion and establishment of invasive non-native species, particularly when these species are already present in the surrounding area. Because cheatgrass is already present in the vicinity of the pad and road, the potential for invasion following construction activities is high. Mitigation measures designed to minimize the spread of cheatgrass, in addition to other invasive, non-native species, are presented in Appendix A (Number 3).

No Action Alternative:

Environmental Consequences: Under the no action alternative, no construction would take place; therefore, invasive, non-native species would not be affected. However, existing cheatgrass infestations will spread in they are not treated.

Migratory Birds

Affected Environment: The project area provides cover, forage, and nesting habitat for a variety of migratory birds. Of these migratory birds, four species are included on the U. S. Fish and Wildlife Service Birds of Conservation Concern (BCC). These species are the pinyon jay (*Gymnorhinus cyanocephalus*), gray vireo (*Vireo vicinior*), black-throated gray warbler (*Dendroica nigrescens*), and Virginia's warbler (*Vermivora virginiae*). Other species that are not on the BCC list but associated primarily with this habitat type include year-round residents such as the juniper titmouse (*Baeolophus*

griseus) and Townsend's solitaire (*Myadestes townsendi*) and migrants such as the blue-gray gnatcatcher (*Polioptila caerulea*). Although no birds of prey (raptors) are known to nest in the project area, the pinyon/juniper habitat provides potential perching, foraging, and nesting sites for several species, including one species on the BCC list, Swainson's hawk (*Buteo swainsoni*).

Other raptors potentially using the pinyon-juniper habitat for perching or nesting include the Cooper's hawk (*Accipiter cooperii*), sharp-shinned hawk (*A. striatus*), red-tailed hawk (*Buteo jamaicensis*), and two small owls, the western screech-owl (*Otus kennicottii*) and northern pygmy-owl (*Glaucidium gnoma*). Another species that would not be expected to nest onsite but could visit the area in search of prey is the golden eagle (*Aquila chrysaetos*); this species is on the BCC list and protected by the Bald and Golden Eagle Protection Act. All of the raptors and other species listed above are protected by the Migratory Bird Treaty Act.

Proposed Action:

Environmental Consequences: Implementation of the proposed action would result in the removal of approximately 12 acres of sagebrush, mountain brush and pinyon-juniper vegetation. This direct loss of habitat could impact individual birds if nest sites or territories are present. Portions of the disturbed acreage would be reclaimed which would reduce long-term habitat loss.

Habitat effectiveness would be reduced as a result of disturbance during natural gas development construction and completion activities. It is possible that during this period, individual birds could be displaced to adjacent habitats due to noise and human presence. Effects of displacement could include increased risk of predation or reproduction failure if adjacent habitat is unsuitable or at carrying capacity or if disturbance leads to nest abandonment. Effects from construction and completion activities would likely be temporary (<3 years) but some disturbance related effects could be expected to continue for the long term (>10 years) as a result of production and maintenance of the wells. Impacts to birds at the species or local population level could include a change in abundance and composition as a result of cumulative habitat fragmentation from existing and future energy development in the area.

The development of reserve pits in the project area may be expected to attract waterfowl and other migratory birds for purposes of resting, foraging, or as a source of free water. The extent and nature of the problem is not well-defined, but birds should be prevented from contacting produced water and drilling and completion fluids that may pose a problem (e.g., acute or chronic toxicity, compromised insulation). Mitigation measures designed to limit access to reserve pits are presented Appendix A (Number 4).

Raptors are not expected to be negatively affected as upland foraging habitat is plentiful in the area. However, raptors nesting in the vicinity could be impacted by noise and human activity if construction, drilling, and completion activities occur during the nesting season. Impacts could include reduced fecundity, nest failure, or nest abandonment. In order to mitigate these potential impacts, a raptor survey would be required prior to the initiation of construction activities. Mitigation measures, including a 60-day timing limitation, may be required if an active nest is identified within 0.25 mile of the proposed developments (Appendix A, Number 5).

No Action Alternative:

Environmental Consequences: The no action alternative would result in no new surface disturbance or increased human activity and would have a minimal effect on migratory bird populations.

Native American Religious Concerns

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

Proposed Action:

Environmental Consequences: Although there would be no direct impacts from the proposed action, indirect impacts from increased access and personnel could result in a range of impacts to unknown Native American resources from illegal collection to vandalism.

A standard Education/Discovery Condition of Approval (COA) for the protection of Native American values would be attached to the APDs (Appendix A, Number 2 and 6). The importance of this COA should be stressed to the operator and its contractors, including informing them of their responsibilities to protect and report any cultural resources encountered.

No Action Alternative:

Environmental Consequences: The no action alternative should not result in impacts to resources of Native American concern because access to this area would not be increased. Existing operations in the Mamm Creek field would remain subject to the Inadvertent Discovery clause of the National Historic Preservation Act (NHPA) and the Native American Graves Protection and Repatriation Act (NAGPRA) which mandate the protection of cultural resources discovered subsequent to the initiation of development activities.

Special Status Species (includes an analysis of Public Land Health Standard 4)

Affected Environment: According to the latest species list from the U. S. Fish and Wildlife Service (<http://mountain-prairie.fws.gov/endspp/CountyLists/COLORADO.htm>), the following federally listed, proposed, or candidate animal species may occur within or be impacted by actions occurring in Garfield and Mesa Counties: Canada lynx (*Lynx canadensis*), bald eagle (*Haliaeetus leucocephalus*), Mexican spotted owl (*Strix occidentalis*), yellow-billed cuckoo (*Coccyzus americanus*), razorback sucker (*Xyrauchen texanus*), Colorado pikeminnow (*Ptychocheilus lucius*), bonytail chub (*Gila elegans*), humpback chub (*Gila cypha*), Uinta Basin hookless cactus (*Sclerocactus glaucus*), Parachute beardtongue (*Penstemon debilis*), and DeBeque phacelia (*Phacelia submutica*).

BLM sensitive plant and animal species with habitat and/or occurrence records in the area include adobe thistle (*Cirsium perplexans*), DeBeque milkvetch (*Astragalus debequaeus*), Naturita milkvetch (*Astragalus naturitensis*), Roan Cliffs blazing star (*Mentzelia rhizomata*), Piceance bladderpod (*Lesquerella parviflora*), Harrington's penstemon (*Penstemon harringtonii*), the milk snake (*Lampropeltis triangulum taylori*), midget faded rattlesnake (*Crotalus viridis concolor*), Great Basin spadefoot (*Spea intermontana*), and Colorado River cutthroat trout (*Oncorhynchus clarki pleuriticus*).

Proposed Action:

Environmental Consequences:

Federally Listed, Proposed, or Candidate Plant Species

The results of a July 2006 survey indicate that there are no federally listed, proposed or candidate plant species or suitable habitat for these species in the project area. Therefore, the proposed action would have “**No Effect**” on these species.

Federally Listed, Proposed, or Candidate Animal Species

No federally listed, proposed, or candidate terrestrial animal species or their habitat are known to occur within the project area. Therefore, no direct or indirect impacts are anticipated and the proposed action would have “**No Effect**” on these species.

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

BLM Sensitive Plant Species

The results of the July 2006 inventory indicate that there are no BLM sensitive plant species or their habitats located in the vicinity of the proposed action.

The nearest location of a special status plant species, Harrington’s penstemon, is 5.4 miles to the northwest of the project area. Harrington’s penstemon prefers open sagebrush communities from 6,500 to 9,200 feet in elevation. Although a sagebrush community is present in the project area, the soils are not suitable for Harrington’s penstemon.

BLM Sensitive Animal Species

Direct effects to the BLM sensitive reptile and amphibian species could include injury or mortality as a result of construction, production, and maintenance activities. These effects would be most likely during the active season for these species, which are April to October for the milk snake, March to October for the midget faded rattlesnake, and May through September for the Great Basin spadefoot. Indirect effects to the milk snake and midget faded rattlesnake could include a greater susceptibility to predation if the road or pad is used to aid in temperature regulation. Overall, however, there is a low likelihood that these species would be substantially affected.

Well pad and road construction would disturb ground and remove vegetation, increasing the potential for erosion and increased sedimentation to the Colorado River. Colorado River cutthroat trout are especially sensitive to increased sediment loads that can impair preferred spawning habitats by smothering eggs and reducing oxygen exchange and covering gravel substrates. Sediment also reduces aquatic insect productivity which impacts food resources for trout and other wildlife. In order to reduce the risk, Best Management Practices (BMPs), and the COAs presented in Appendix A (Numbers 7-9, 16) would be implemented to minimize sedimentation.

No Action Alternative:

Environmental Consequences: Under the no action alternative, the developments described in the proposed action would not occur. Therefore, no impacts to special status species are anticipated.

Analysis on the Public Land Health Standard for Special Status Species: Potential habitat for some BLM sensitive wildlife species occurs within or near the proposed action area, but the likelihood of their presence is low. This consideration, in combination with conditions of approval, is expected to result in no adverse effect to special status wildlife species. Since there is no potential habitat for special status plant species in the project area, the proposed action should have no effect on any special status plant species. Therefore, the proposed action should not result in failure to achieve Standard 4 for special status wildlife and plant species.

Because the proposed developments would not occur, the no action alternative would have no bearing on Standard 4.

Wastes, Hazardous or Solid

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

Proposed Action:

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

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

No Action Alternative:

Environmental Consequences: The no action alternative would result in no new surface disturbance, creating little opportunity for hazardous or solid waste to be introduced into the environment.

Water Quality, Surface and Ground (includes an analysis of Public Land Health Standard 5)

Surface Water

Affected Environment: Proposed activities would occur south of the town of Silt within the 13,364-acre East Mamm Creek subwatershed. The proposed access road would involve upgrading the existing two-track road that parallels an unnamed ephemeral tributary to East Mamm Creek.

This access road would be located on the west side of this unnamed drainage and would cross it to access the proposed well pad. North of the project area, the drainage joins East Mamm Creek which eventually joins the Colorado River as Mamm Creek west of Silt.

The unnamed ephemeral drainage is not listed on the State of Colorado's *Stream Classifications and Water Quality Standards* (CDPHE, Water Quality Control Commission, Regulation No. 37) list, *303(d) List of Water Quality Limited Segments Requiring TMDLS* (CDPHE, Water Quality Control Commission, Regulation No. 93), or the *Monitoring and Evaluation List* (CDPHE, Water Quality Control Commission, Regulation No. 94).

Proposed Action:

Environmental Consequences: The construction of the proposed well pad, pipeline, and access road would involve the removal of soil and vegetation resulting in an increase in erosion potential and offsite sedimentation. With measures to control runoff water in place, reestablishment of vegetation, and proper engineering of roads and well pads; the potential for sediment transport to the adjacent unnamed ephemeral drainage, and eventually the Colorado River, would be minimized. The mitigation measures presented in Appendix A (Numbers 7-9, 16) would be implemented to protect surface water.

No Action Alternative:

Environmental Consequences: The no action alternative would result in no new surface disturbance and would have no effect on surface water.

Waters of the U.S.

Affected Environment: Section 404 of the Clean Water Act requires a Department of the Army permit from the US Army Corps of Engineers prior to discharging dredged or fill material into waters of the United States as defined by 33 CFR Part 328. A Corps permit is required for both permanent and temporary discharges into waters of the United States. Due to the flashy nature of area drainages and anticipated culvert maintenance, the Corps of Engineers recommends designing drainage crossings for the 100-year event. The drainage crossing of the ephemeral tributary to East Mamm Creek would require Corps approval prior to construction.

Proposed Action:

Environmental Consequences: The drainage crossing would require the use of fill material to span the drainage which could result in additional sediment available for transport to the drainage if not properly stabilized. Rip rap and revegetation practices should be used to stabilize road fill at the crossing. Improperly designed drainage crossings, in particular undersized culverts and poorly aligned culverts, could result in channel degradation that may include: excessive bank erosion at culvert outlets, ponding of flows and excess sedimentation at culvert inlets, and channel scour both at inlets and outlets. The mitigation measures presented in Appendix A (Number 7, 9, 11, 16) would be implemented to protect waters of the U.S.

No Action Alternative:

Environmental Consequences: The no action alternative would have no effect on waters of the U.S.

Groundwater

Affected Environment: The project area is located within the Division of Water Resources (DWR) Water Division 5, which encompasses Garfield County. The groundwater in this division is generally found in alluvial and sedimentary aquifers.

The major alluvial aquifer in the project area is the Colorado River Basin. The alluvium in the Colorado River Basin generally consists of unconsolidated boulders, cobbles, gravel, sand, silt, and clay. The thickness of the alluvium is variable, but tends to be thinner in the upper reaches and thicker in the lower reaches. Generally, alluvial well depths are less than 200 feet and typically range from 20 to 40 feet. The quality of alluvial groundwater in the Colorado River Basin can vary widely, and is affected by return flow quality, mineral weathering and dissolution, cation-anion exchange with alluvial minerals, and organic compound loading from fertilizer and pesticide leaching.

The project area lies in the southern portion of the Piceance Basin, the major sedimentary aquifer in the region. The basin is drained by a number of tributary creeks that flow into the Colorado River. Most of the groundwater recharge is provided by winter precipitation and stored as snowpack at higher elevations. The sources of Piceance Basin groundwater resources in the project area are from the Mesaverde Group.

According to the Colorado Oil & Gas Conservation Commission (COGCC) database, the nearest water well is located approximately 2,150 feet north of the proposed G32E wellpad. The well, which is 85 feet in depth, is used primarily for domestic purposes; therefore it can be assumed that the water is fit for human consumption.

Proposed Action:

Environmental Consequences: With the use of proper construction practices, drilling practices, and with the use of best management practices, no significant adverse impact to groundwater aquifers is anticipated to result from the proposed action. A geologic and engineering review was performed on the 10-point drilling plan to ensure that the cementing and casing programs adequately protect the downhole resources.

No Action Alternative:

Environmental Consequences: The no action alternative would have no impact on groundwater.

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.

The no action alternative would have no bearing on Standard 5 because no development activities would take place.

Other Affected Resources

In addition to the critical elements, the resources presented in Table 3 were considered for impact analysis relative to the proposed action and no action alternative. Resources that would be affected by the proposed action and no action alternative are discussed below.

Table 3. Other Resources Considered in the Analysis.			
<i>Resource</i>	<i>NA or Not Present</i>	<i>Present and Not Affected</i>	<i>Present and Affected</i>
Access and Transportation			X
Cadastral Survey	X		
Fire/Fuels Management		X	
Forest Management	X		
Geology and Minerals			X
Law Enforcement	X		
Paleontology			X
Noise			X
Range Management			X
Realty Authorizations	X		
Recreation		X	
Socio-Economics		X	
Soils			X
Vegetation			X
Visual Resources			X
Wildlife, Aquatic			X
Wildlife, Terrestrial			X

Access and Transportation

Affected Environment: Access to the project area would be from Interstate 70 at Garfield County Airport exit. From Interstate 70, Garfield County Road (CR) 315 and existing field development roads would provide the primary haul route to the project area. From CR315, access to the proposed well pad originates on privately owned lands with no legal public access.

Environmental Consequences: The proposed action would result in a substantial, but short-term, increase in truck traffic. The largest increase would be during rig-up, drilling, and completion activities. Data indicates that approximately 1,160 truck trips over a 30-day period would be required to support the drilling and completion of each well (Table 4). Extended across the development of two wells, approximately 2,320 trips, primary by pick-ups and 6- and 10-wheeled trucks, would be required over a 60-day period.

Table 4. Traffic Associated with Drilling and Completion Activities.		
Vehicle Class	Number of trips per well	Percentage of total
16-wheel tractor trailers	88	7.6%
10-wheel trucks	216	18.6%
6-wheel trucks	452	39.0%
Pickup trucks	404	34.8%
Total	1,160	100.0%
BLM 2006 Note: trips by different vehicle types are not necessarily distributed evenly during the drilling process. Drilling and completion period is approximately 30 days.		

Once the wells are producing, the volume of traffic would increase dramatically. During the operations phase of the project, traffic would be limited to weekly visits to the well pad for inspection and

maintenance. Each well may have to be recompleted once per year, requiring three to five truck trips per day for approximately 7 days.

The public has no legal access to the area and public access would not be affected. Degradation of field development roads may occur due to heavy equipment travel and fugitive dust and noise would be created. The mitigation measures presented in Appendix A (Numbers 9 and 12) would be implemented to ensure adequate road construction and maintenance.

No Action Alternative:

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

Geology and Minerals

Affected Environment: Mineral resources in the vicinity of the project area include oil and gas deposits, coal, and sand and gravel. There are several known hydrocarbon-producing marine sands located at the base of the Mesaverde Group, including the Cameo coal zone. Sand and gravel deposits are found in limited amounts in Quaternary alluvial deposits along stream valleys.

The proposed wells would penetrate the Wasatch Formation and members of the Mesaverde Group. In these wells, conventional sands in the Mesaverde Group would be explored for possible economic gas recovery.

Proposed Action:

Environmental Consequences: Implementation of the proposed action would result in natural gas and associated water being produced from the hydrocarbon-bearing sands within the Mesaverde Group. The amount of natural gas that may be potentially produced from the proposed wells cannot be estimated accurately. However, if the wells become productive, initial production rates would be expected to be highest during the first few years of production, then decline during the remainder of the wells' economic lives. Natural gas production from the proposed wells would contribute to the draining of hydrocarbon-bearing reservoirs within the Mesaverde Group in this area, an action that would be consistent with BLM objectives for mineral production.

Casing programs have been designed to specifically prevent hydrocarbon migration from gas-producing strata penetrated by the well bore during drilling, initial production and after completion of the well. Identification of potential fresh water bearing zones, aquifers, gas producing zones, and under- and over-pressured formations are incorporated into drilling scenarios for the proposed wells. Estimates of what depth these zones would be encountered are used to determine drilling fluids, fluid densities, surface casing depths, and production planning. The proposed casing and cementing program has been designed to protect and isolate all usable water zones, potentially productive zones, lost circulation zones, and abnormally high-pressure zones.

No Action Alternative:

Environmental Consequences: The no action alternative would have no effect on geology and minerals because the wells described in the proposed action would not be drilled.

Noise

Affected Environment: Noise in this area is created by activities associated with the development of the Mamm Creek field. These development activities are ongoing. The proposed developments would occur in an area far removed from clustered or concentrated commercial activities or residential development. The nearest residences are located approximately 0.5 mile to the north.

Noise levels reported for various elements of oil and gas development are between 50 decibels (dB(A)) for the operation of typical compressor station to approximately 68 dB(A) for truck traffic and crane operation (Table 5). These levels are a function of distance; the closer to the source, the greater the noise.

Table 5. Noise Levels Associated with Oil and Gas Production and Development.	
<i>Source</i>	<i>Reported Noise Level</i>
Typical compressor station	50 dB(A) (375 feet from property boundary)
Pumping units	50 dB(A) (325 feet from well pad)
Fuel and water trucks	68 dB(A) (500 feet from source)
Crane for hoisting rigs	68 dB(A) (500 feet from source)
Concrete pump used during drilling	62 dB(A) (500 feet from source)
Average well construction site	65 dB(A) (500 feet from source)
Source: La Plata County (2002)	

Implementation of the proposed action would result in increased noise levels particularly during road and well pad construction, well drilling, and completion. Short-term (7 to 14 day) increases in noise levels would characterize road and well pad construction. Based on the Inverse Square Law of Noise Propagation (Harris 1991) and an average construction site noise level of 65 dB(A) at 500 feet, construction noise at the nearest residences, about 0.5 mile distant, would be approximately 40 dB(A) or roughly equivalent to noise levels associated with a quiet suburban setting (EPA 1974).

Noise impacts from drilling and completion activities would last approximately 45 to 60 days at each well. Noise would occur continuously, 24 hours per day, during the drilling and completion period (i.e., 60 days). Based on a measured noise level of 68 dB(A) at 500 feet, actions associated with drilling and completion would generate approximately 43 dB(A) at 0.5 mile, again approximating a quiet suburban setting. At this distance, activities associated with drilling and completion would not likely be greater than background noise levels during the day. However, this level of noise could interrupt sleep during nighttime drilling and completion operations.

Traffic noise levels would also be elevated as a consequence of the proposed action. The greatest increase would be along access roads during the drilling and completion phases. Based on the La Plata County data presented in Table 5, approximately 68 decibels (dB (A)) of noise (at 500 feet) would be created by each fuel and water truck that travels these roads. This level of noise approximates that of a noisy urban setting (EPA 1974). Less noise would be created by smaller trucks and passenger vehicles such as pickup trucks and sport utility vehicles. Although the duration of increased noise from this source would be short, it would occur repeatedly during the drilling and completion phases. While exposure to these noise levels is not likely to be harmful, it probably would be annoying to local residents.

Noise impacts would decrease during the production phase. Pumping units and compressor noise levels would be approximately 25 dB (A) at 0.5 mile and would be likely be within background noise levels.

Small truck traffic would continue, but would be less frequent than the drilling and production phases and probably would not be a source of annoyance to residents. During maintenance and workovers, noise would increase above noise levels associated with routine well production.

No Action Alternative:

Environmental Consequences: The no action alternative would not result in an increase in current noise levels, because the development activities described under the proposed action would not occur.

Paleontology

Affected Environment: The surficial formation in the project area is the Paleocene Wasatch Formation. It is classified as a Class 1 formation with areas known or likely to produce abundant scientifically important fossils, such as early horses, rare primates, rhinoceroses, birds, crocodiles, rodents, fish, turtles, fresh water clams, snails, and plants. These fossils are vulnerable to surface-disturbing activities.

A review of existing records indicates that there are three paleontological sites located along the proposed access road and the nearby drainage. One of the sites is located approximately 20 feet east of the access road alignment.

Proposed Action:

Environmental Consequences: Based on the potential for adverse effects associated with the construction of the proposed developments, a paleontological survey was conducted to confirm the existence of the known sites and further assess potential impacts associated with the implementation of the proposed action (Uinta Paleontological Associates 2007). Although the existing sites were not located and no new fossiliferous material was identified, monitoring was recommended due to the potential of the area and the bedrock disturbance that would accompany the proposed construction activities.

Based on these recommendations, monitoring of the construction by a qualified paleontologist during construction of the proposed well pad, access road and pipeline alignment will be required as a condition of approval (Appendix A, Number 13). If any fossils are noticed at anytime, the AO must be notified so the resource can be recorded, evaluated, stabilized, or mitigated. The standard paleontology discovery condition of approval shall be applied to the APDs (Appendix A, Number 14).

No Action Alternative:

Environmental Consequences: The no action alternative would result in no new surface disturbance and would have no effect on paleontological resources in this area.

Range Management

Affected Environment: The proposed gas wells would be located on public land on the Dry Hollow – Reservoir Gulch Allotment # 08127. Table 6 summarizes the permitted grazing use on the allotment.

Proposed Action:

Environmental Consequences: Implementation of the proposed action would result in a minimal loss (< 1 AUM) of forage available to livestock. It is not anticipated that the level of impact would require adjustment of the livestock stocking rate. Rehabilitation of vegetation on the location would result in the reestablishment of forage in about 3 years. Livestock may also be minimally disturbed by the increase in

human activity during construction, drilling, completion, and maintenance operations. Any range improvement projects disturbed or damaged during construction or drilling activities would be repaired or replaced by the operator (Appendix A, Number 15).

<i>Allotment Name and Number</i>	<i>Permittee</i>	<i>Livestock Type and Number</i>	<i>Season Of Use</i>	<i>% PL</i>	<i>AUMs</i>
Dry Hollow - Reservoir Gulch #08127	Kelly Couey	Cattle 73	06/01-06/15	100	36
	Marvelle Couey	Cattle 195	06/01-06/15	100	96
		Cattle 57	06/16-10/15	100	229
	Barry Shideler	Cattle 315	06/01-06/15	90	140
	Ben Shideler	Cattle 285	06/01-06/15	100	141
	Record Ranch, Don Fulton	Cattle 140	06/01-06/15	100	69
	Robert T. Wheeler	Cattle 90	06/01-06/15	100	44

Fencing would be required to prevent grazing impacts after interim reclamation of the pad (Appendix A, Number 16d).

No Action Alternative:

Environmental Consequences: The no action alternative would result in no new surface disturbance and would have no impact on range management in the area.

Soils (includes an analysis of Public Land Health Standard 1)

Affected Environment: The *Soil Survey of Rifle Area, Colorado: Parts of Garfield and Mesa Counties* (USDA 1985) indicates that the proposed well pad would be located on the soil map unit Heldt clay loam and that the proposed two-track road upgrade would be located on the soil map units (south to north): Morval-Tridell complex, Torriorthents-Camborthids-Rock outcrop complex, Jerry loam, Ascalon-Pena complex, Dollard-Rock outcrop shale complex, and Torrifluvents. The following is a brief description of the soil map units:

- Heldt clay loam – This deep, well-drained soil is found on alluvial fans and sides of valleys at elevations ranging from 5,000 to 6,000 feet and on slopes of 6 to 12 percent. Parent material for this soil is sandstone and shale. Erosion hazard is moderate and surface runoff is medium. Primary uses for this soil are agricultural and include irrigated hay, grazing, and irrigated crops.
- Morval-Tridell complex – This soil map unit is found on alluvial fans and the sides of mesas at elevations ranging from 6,500 to 8,000 feet and on slopes of 6 to 25 percent. The Morval soil makes up about 55 percent of the unit and is found on lower slopes, while the Tridell soil makes up about 30 percent of the unit and is found on the sides of mesas. Both soils are deep, well-drained and have medium surface runoff and moderate erosion hazard. The primary uses for this soil map unit include grazing and wildlife habitat.
- Torriorthents-Camborthids-Rock outcrop complex, steep – This soil map unit consists of sandstone and shale bedrock and soils of variable depth occurring on slopes of 15 to 70 percent. About 45 percent of this complex is Torriorthents, 20 percent is Camborthids, and 15 percent is Rock outcrop. The Camborthids occur on the lower toe slopes on foothills and mountainsides

while the Torriorthents are found on the foothills and mountainsides below the Rock outcrop. The Torriorthents are shallow to moderately deep, and clayey to loamy with gravel, cobbles, and stones. The Camborthids are shallow to deep and clayey to loamy. Rock outcrop primarily consists of Mesa Verde sandstones and Wasatch shales with occasional basaltic boulders and stones. This complex is characterized by moderate to severe erosion hazard. Primary uses for this complex include grazing, wildlife habitat, and recreation.

- Jerry loam – This deep, well-drained soil is found on mountainsides at elevations ranging from 7,000 to 9,500 feet and on slopes of 12 to 50 percent. Parent material for this soil is sandstone, shale, and basalt. Surface runoff for this soil is slow and the erosion hazard is moderate. Primary uses for this soil include wildlife habitat and grazing.
- Ascalon-Pena complex – This soil map unit is found on the sides of valleys and alluvial fans at elevations ranging from 5,000 to 6,500 feet and on slopes of 6 to 25 percent. The Ascalon soil makes up about 65 percent of the unit and is found on lower angle slopes while the Pena soil makes up about 25 percent of the unit and is found on steeper slopes. The Ascalon soil is deep, well-drained and has medium surface runoff with moderate erosion hazard. The Pena soil is deep, well-drained and has slow surface runoff with moderate erosion hazard. Primary uses for this complex include wildlife habitat and limited grazing.
- Dollard-Rock outcrop, shale, complex – This complex consists of shale outcrops and shale derived soils that are found on hills and mountainsides at elevations ranging from 6,000 to 7,500 feet and on slopes of 25 to 65 percent. Approximately 60 percent of the complex is the Dollard soil and 20 percent is shale outcrop. The Dollard soil is moderately deep, well-drained and has rapid surface runoff with severe erosion hazard. Surface runoff for the Rock outcrop is rapid and the erosion hazard is very severe. This complex is primarily used for limited grazing and wildlife habitat.
- Torrifluvents – This broadly defined unit consists of deep, well-drained to poorly drained soils that occur on floodplains and along drainageways on slopes of 0 to 6 percent. These soils form in alluvium and range from loamy sand to clay loam in the surface layers and from sandy loam to cobbles in underlying layers. As a result of the low slope angles on which these soils occur; erosion hazard is low. Primary uses for this unit include wildlife habitat, recreation, and grazing.

Proposed Action:

Environmental Consequences: There would be some soil loss, loss of soil productivity, and an increase in sediment available for transport resulting from construction and maintenance activities. The greatest potential for erosion would be associated with the construction of the proposed access road and pipeline which would pass through soils that are characterized by moderate to severe erosion potential. Due to the erosion hazard of these soils and the proximity of the proposed road to an ephemeral drainage, mitigation measures would be implemented to minimize potential negative impacts associated with soil loss and transport (Appendix A, Numbers 7-9, 16).

No Action Alternative:

Environmental Consequences: The no action alternative would have no impact on soil resources in the area.

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

The no action alternative would have no bearing on Standard 1, because the developments described in the proposed action would not occur.

Vegetation (includes an analysis of Public Land Health Standard 3)

Affected Environment: Vegetation in the project area is variable, consisting of a sagebrush community with pinyon-juniper and a mixed mountain shrub-oakbrush community in the vicinity of the proposed pad. Vegetation along the proposed access road and pipeline alignment consists of a mixed mountain shrub community dominated by mountain mahogany, serviceberry, snowberry, Indian apple and Gambel's oak.

Proposed Action:

Environmental Consequences: The well pad would result in an estimated 4.9 acres of disturbance, and a new access road and pipeline would result in additional disturbance of 7.1 acres, for a total of 12.0 acres of disturbance. With implementation of reclamation practices identified in Appendix A (Number 16), establishment of desirable herbaceous vegetation on the unused portions of the pad, pipeline and road could be restored within 2 to 3 years. The establishment of mature shrubs could take from 5 to 25 years, and the establishment of trees would take even longer; however, because of the periodic workovers and the potential for additional well bores to be drilled from this pad, it is likely that vegetation would remain in an early seral stage for the life of the wells.

No Action Alternative:

Environmental Consequences: Under the no action alternative, no drilling activities or construction would take place; therefore, vegetation would not be affected.

Analysis on the Public Land Health Standard for Plant and Animal Communities (partial, see also **Wildlife, Aquatic and Wildlife, Terrestrial**): The surface disturbance associated with the proposed action has the potential to encourage expansion and dominance of the site by cheatgrass and other noxious and invasive weeds. The **Invasive, Non-native Species** section includes provisions to revegetate the disturbances with native vegetation and to control noxious weeds. If successfully revegetated, the proposed action may result in a localized improvement in vegetative conditions by improving the density, frequency and composition of native plant species.

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

Visual Resources

Affected Environment: The proposed pad and the northern half of the access road and pipeline alignment would lie within an area classified as VRM Class II, while the southern half of the access road and pipeline would be located in an area classified as VRM Class III (BLM 1984).

VRM Class II areas are managed to retain the existing character of the landscape. The level of change to the characteristic landscape should be low. Management activities may be seen, but should not attract the attention of the casual observer. Any changes must repeat the basic elements of form, line, color, and texture found in the predominant natural features of the characteristic landscape.

VRM Class III areas are managed 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.

Proposed Action:

Environmental Consequences: The construction of the well pad, pipeline, and access road would create contrasts by removing pinyon-juniper, sagebrush, and shrub vegetation and exposing bare ground. Contrasts in color, form, line, and texture would be present within the existing landscape in the short-term. Interim reclamation of the pad, access road, and pipeline with seeded shrub and grass species would reduce contrasts after two to three growing seasons. With the implementation of mitigation measures (Appendix A, Number 17), the proposed pad, access road and pipeline would meet VRM Class II and III objectives and not dominate the views from the valley floor with implementation of mitigation measures.

After conducting field review of the project, the proposed disturbances would not be expected to be visible from the key viewing areas on the valley floor and they would not adversely affect any key viewing areas or viewsheds.

No Action Alternative:

Environmental Consequences: The no action alternative results in no new surface disturbance and would have no impact on visual resources in the area.

Wildlife, Aquatic (includes an analysis of Public Land Health Standard 3)

Affected Environment: The well pad, access road, and pipeline would be constructed adjacent to an ephemeral drainage that feeds into East Mamm Creek which eventually enters the Colorado River approximately 11.5 miles to the north. East Mamm Creek contains a variety of aquatic insects and may contain a marginal fish population, though up-to-date records are lacking. Fish, if present, likely include brook and/or brown trout. In addition to the special status fish species addressed in the **Special Status Species** section, the Colorado River contains a variety of fishes and aquatic insects.

Proposed Action:

Environmental Consequences: Due to the surface disturbance associated with construction activities, soils would be exposed to increased erosion potential and nearby drainages would be vulnerable to sedimentation. Erosion and sedimentation has the potential to impact trout species by silting in important spawning substrates and limited pool habitat, and by covering gravels and cobbles needed by aquatic insect larvae important as a food supply for the introduced trouts and some native fishes. Sediment could reduce water quality and limit fish productivity.

Sediment that ultimately reaches the Colorado River should have minimal impacts to fisheries as sediment levels are projected to be well within the background levels for the Colorado River. To minimize impacts to downstream fishes and aquatic insects, the mitigation measures presented in Appendix A (Numbers 7-12) would be required.

No Action Alternative:

Environmental Consequences: The no action alternative results in no new surface disturbance and would have no impact on aquatic wildlife in the area.

Analysis on the Public Land Health Standard 3 for Plant and Animal Communities (partial, see also **Vegetation and Wildlife, Terrestrial**): The proposed action, in conjunction with a large amount of similar activity occurring within the larger watershed, would likely trend the area away from meeting Standard 3 for sediment sensitive aquatic wildlife.

The no action alternative would have no bearing on Standard 3, because the developments described in the proposed action would not occur.

Wildlife, Terrestrial (includes an analysis of Public Land Health Standard 3)

Affected Environment: The project area traverses a variety of vegetation types including sagebrush, pinyon-juniper, oakbrush, and mixed mountain shrub habitat with a relatively productive understory of grasses and forbs. The project area is located in mapped big game winter range that has been identified as high value habitat.

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. The area is relatively undisturbed, and has a diverse plant assemblage that provides good foraging and security habitats.

The Federal lease associated with proposed action contains a big game winter habitat timing limitation (TL) stipulation that prohibits construction, drilling, or completion activities between January 16th and April 29th.

Proposed Action:

Environmental Consequences: The proposed action would result in the loss of approximately 12.0 acres of high value habitat leading to further fragmentation and reduction on habitat connectivity and habitat patch size. Losses of forage and cover would result. However, successful reclamation of the disturbed areas would mitigate direct habitat losses over the long-term

Increased human use in the area, particularly during construction and drilling and completion activities, would likely displace some animals away from preferred habitats. Compliance with the timing limitation stipulation would reduce the amount of displacement during the critical winter months by prohibiting construction, drilling, and completion activities. To further mitigate displacement associated with development activities in the project area, remote monitoring of wells during the TL would be required (Appendix A, Number 18)

No Action Alternative:

Environmental Consequences: The no action alternative would result in no impacts to terrestrial wildlife because the developments described in the proposed action would not occur.

Analysis on the Public Land Health Standard for plant and animal communities (partial, see also **Vegetation and Wildlife, Aquatic**): The action would result in direct and indirect losses of habitat, further fragment remaining habitats, and resulting in increased human use in the area. Given the level of

activity in the greater area, the proposed action would further trend the watershed away from meeting Standard 3 for some terrestrial wildlife species.

The no action alternative would have no bearing on Standard 3 because no new developments would occur.

SUMMARY OF CUMULATIVE IMPACTS

The Draft and Final Roan Plateau Resource Management Plan Amendment & Environmental Impact Statements (BLM 2004, 2006) collectively analyzed six alternatives for oil and gas development in the Roan Plateau planning area. The assessment included an analysis of impacts of past, present, and reasonable foreseeable future actions, including predicted future oil and gas development, on both public and private lands. Since the Final Roan Plateau RMP Amendment and EIS presents a recent analysis of cumulative impacts in an area adjacent to that of the proposed action, it is incorporated by reference.

Until relatively recently, modifications of the region have been characteristic of agricultural and ranching lands, with localized industrial impacts associated with the railroad and I-70 highway corridors and the Anvil Points mine. More recently, these changes are cumulative to the growth of residential and commercial uses, utility corridors, oil and gas developments, and other rural industrial uses. These increasing activity levels have accelerated the accumulation of impacts in the area. These impacts have included: 1) direct habitat losses, 2) habitat fragmentation and losses in habitat effectiveness, 3) elevated potential for runoff, erosion, and sedimentation, 4) expansion of noxious weeds and other invasive species, and 5) increased noise and traffic and reductions in the scenic quality of the area (BLM 2006: 4-1 to 4-129).

Although none of the cumulative impacts described in the Final Roan Plateau RMP Amendment and EIS were characterized as significant, and while new technologies and regulatory requirements have reduced the impacts of some land uses, it is nonetheless clear that past, present, and reasonably foreseeable future actions has had and would continue to have adverse affects on various elements of the human environment. The anticipated impact levels for existing and future actions range from negligible to locally major, and primarily negative, for specific resources. The primary reasons for this assessment are twofold: (1) the rate of development, particularly oil and gas development, is increasing in the area, resulting in an accelerated accumulation of individually nominal effects; and (2) the majority of residential and commercial expansion, as well as oil and gas development, has occurred, and is likely to continue to occur, on private holdings where mitigation measures designed to protect and conserve resources are not in effect.

It is clear that the proposed action would contribute to the collective impact. Additional ground disturbance would occur, additional habitat would be lost, noise and traffic would increase, and additional oil-and gas-related developments would be visible. Therefore, the impacts of the proposed action would move the cumulative impact incrementally closer to a threshold of significance for some resources. However, the contribution to the accumulated effects would be minor because the scale of the proposed development is relatively small, multiple wells would be developed from a single pad, and mitigation measures represented by the conditions of approval for resource protection are mandated for implementation (Appendix A).

PERSONS AND AGENCIES CONSULTED:

Miracle Pfister, Permit Agent, EnCana Oil & Gas (USA) Inc.

Joe Schmid, Construction Foreman, EnCana Oil & Gas (USA) Inc.

Dayton Slaugh, Surveyor, Tri-State Land Surveying , Inc.

Brenda Linster Herndon, Permit Agent - Gathering, EnCana Oil & Gas (USA) Inc.

Preston Nelson, Permit Coordinator - Gathering, EnCana Oil & Gas (USA) Inc.

INTERDISCIPLINARY REVIEW:

<i>Name</i>	<i>Title</i>	<i>Responsibility</i>
Jim Byers	Natural Resource Specialist	Team Leader
Mark Ennes	Planning and Environmental Coordinator	NEPA compliance, Access and Transportation, Noise
Cheryl Harrison	Archaeologist	Cultural Resources, Native American Religious Concerns
Kay Hopkins	Outdoor Recreation Planner	Visual Resources, ACECs, WSRs
Jeff O'Connell	Hydrologist	Soil, Air, Water, Geology, Paleontology
Beth Brenneman	Ecologist	Vegetation, Special Status Species (plants), Invasive Non-native species
Jeff Cook	Wildlife Biologist	Terrestrial and Aquatic wildlife, Special Status Species (fish and wildlife), Migratory Birds
Isaac Pitman	Rangeland Specialist	Range management
Marty O'Mara	Petroleum Engineer	Downhole Conditions of Approval

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FONSI
CO-140-2007-022 EA

EnCana Oil & Gas (USA) Inc. Proposal to Drill 2 Wells on Proposed G32E Well Pad

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

DECISION RECORD

DECISION: It is my decision to approve the Application for Permit to Drill to directionally drill two wells (HMU 32-3 and MCU 32-7 wells from G32E Pad) with the conditions of approval presented in Appendices A and B 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 attached conditions of approval.

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

NAME OF PREPARER: Jim Byers, Natural Resource Specialist

SIGNATURE OF PLANNING AND ENVIRONMENTAL COORDINATOR:

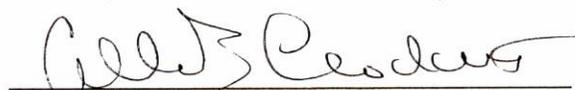


Planning and Environmental Coordinator

5/8/07

Date

SIGNATURE OF AUTHORIZED OFFICIAL:



Authorized Officer

5/8/07

Date

APPENDIX A
SURFACE USE CONDITIONS OF APPROVAL

**SURFACE USE CONDITIONS OF APPROVAL
CO-140-2007-022 EA**

1. Administrative Notification. At least forty-eight (48) hours prior to construction of access road, pipeline and/or well pad, the operator shall notify BLM representative of construction startup plans.
2. Cultural Resource Education/Discovery. All persons in the area who are associated with this project must be informed that if anyone is found disturbing historic, archaeological, or scientific resources, including collecting artifacts, the person or persons shall be subject to prosecution.

Pursuant to 43 CFR 10.4(g), the BLM authorized officer must be notified, by telephone, with written confirmation, immediately upon the discovery of human remains, funerary items, sacred objects, or objects of cultural patrimony. Further, pursuant to 43 CFR 10.4 (c) and (d), activities must stop in the vicinity of the discovery and the discovery must be protected 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, 36 CFR 800.112). Operations may resume at the discovery site upon receipt of written instructions and authorization by the authorized officer. Approval to proceed shall 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 shall inform the holder as to:

- whether the materials appear eligible for the National Register of Historic Places-
- the mitigation measures the holder shall likely have to undertake before the site can be used (assuming in situ preservation is not necessary)
- 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 shall be responsible for mitigation costs. The authorized officer shall 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 shall 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 shall 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 shall also be protected. Impacts that occur to such resources, which are related to the authorizations activities, shall be mitigated at the proponent's cost including Native American consultation cost.

3. Weed Control. The Operator shall regularly monitor and promptly control noxious weeds or other undesirable plants species as set forth in the Glenwood Springs Energy Office *Noxious and Invasive Weed Management Plan for Oil and Gas Operators*, dated March 2007. A Pesticide Use Proposal (PUP) must be approved by BLM prior to the use of herbicides.
4. Migratory Birds. It shall be the responsibility of the operator to comply with the Migratory Bird Treaty Act with respect to “take” of migratory bird species. The term “take” means to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct. As such, the operator is requested to prevent use by migratory birds of reserve pits, produced water pits, and evaporation pits, that store or are expected to store fluids which may pose a risk to such birds (e.g., migratory waterfowl, shorebirds, wading birds and raptors) during completion and after completion activities have ceased. Several established methods to prevent bird access are known to work. Methods may include but are not limited to netting, the use of bird-balls, or other alternative methods that effectively prevent bird access/use. Regardless of the method used, it shall be applied within 24 hours after completion activities have begun. All lethal and non-lethal events that involve migratory birds shall be reported to the Natural Resource Specialist immediately upon their discovery.
5. Raptors. To protect nesting raptors, raptor surveys shall be conducted prior to any oil and gas development activities. If raptor surveys have previously been conducted for a project, new raptor surveys shall be required if a period of 2 years or greater has elapsed between initial surveys and the commencement of new development activities. All potential nesting habitat within 0.25 mile of well pads and 0.125 mile of roads and pipelines shall be surveyed and the results documented and submitted to the BLM Glenwood Springs Energy Office wildlife biologist. If an active raptor nest is located within 0.25 mile of a proposed well pad or 0.125 mile of a proposed road or pipeline, a 60-day timing limitation during the critical nesting period and/or relocation of the well pad/road/pipeline up to 200 meters may be required. In the event of an active raptor nest within 0.25 mile of developments, the operator is advised to ensure compliance with the Migratory Bird Treaty Act by contacting Creed Clayton, U.S. Fish and Wildlife Service (USFWS), Glenwood Springs Energy Office at 970-947-5219 or at john_c_clayton@blm.gov and Jeff Cook, BLM, Glenwood Springs Energy Office at 970-947-5231 or at jeffrey_cook@blm.gov.
6. Native American. The Native American Graves Protection and Repatriation Act (NAGPRA), requires that if inadvertent discovery of Native American Remains or Objects occurs, activity must cease in the area of discovery, a reasonable effort made to protect the item(s) discovered, and immediate notice made to the BLM Authorized Officer, as well as the appropriate Native American group(s) (IV.C.2). Notice may be followed by a 30-day delay (NAGPRA Section 3(d)).
7. Pad Construction Measures. The following changes shall be made to Cut/Fill sheet found in the Surface Use Plan for G32E Pad:

Corners 2 and 8 shall be constructed so no fill material is sidecast onto the sideslope of the nearby drainage. Rock placement, cleared trees and brush, and/or straw wattles could also be installed along the fill slopes and excess material piles to stabilize slope, minimize sedimentation into the existing draw, and reduce soil rilling. Topsoil stockpile shall be seeded within 48 hours of finishing pad construction with the specified seed mix.
8. Material Sidecasting Limits. No sidecasting of material during road construction shall be allowed on any sideslopes exceeding 35%. Furthermore, the well pad shall be constructed to avoid sidecasting of material into dry gulches at north and west sides of pad.
9. Road Construction Standards and Surfacing. Roads shall be crowned, ditched, surfaced, and constructed to BLM Gold Book standards. Roads should be periodically re-graveled when ruts

exceed 6 inches in depth or as directed by the Authorized Officer. Initial gravel application shall be a minimum lift of 6 inches.

10. Wetlands and Waters of the U.S. The operator shall obtain appropriate permits from the U.S. Army Corps of Engineers (contact Sue Nall at 970-243-1199 x16 or susan.nall@usace.army.mil) prior to discharging fill material into waters of the U.S. in accordance with Section 404 of the Clean Water Act. Waters of the U.S. are defined in 33 CFR Section 328.3 and may include perennial, intermittent, and ephemeral streams.
11. Culverts. Culverts at drainage crossings shall be installed during no-flow or low-flow conditions and shall be designed and installed to pass a 25-year or greater storm event. On perennial streams, culverts shall be designed to allow for passage of aquatic biota. The minimum culvert diameter in any installation, drainage crossing or road drainage, is 18 inches. For crossings of waters of the U.S., the U.S. Army Corps of Engineers may apply additional or more stringent requirements on culvert design (contact Sue Nall at 970-243-1199 x16 or susan.nall@usace.army.mil).
12. Road Maintenance. Operator shall be responsible for providing timely year-round road maintenance and cleanup on the access road. A regular schedule for maintenance shall include, but not be limited to, blading, ditch and culvert cleaning, road surface replacement and dust abatement. The road shall be crowned, ditched, and drained with culverts and/or water dips. Initial gravel application shall be a minimum of 4 inches. When rutting within the traveled way becomes greater than 6 inches, gravel shall be applied as approved by the Authorized Officer.
13. Paleontological Resource Monitoring. As recommended in the Preliminary Field Survey Report for the Access Right-of-Way and G32E Pad prepared by Uinta Paleontological Associates, Inc., monitoring during road and pad construction activities shall be required. Such monitoring shall be conducted by qualified paleontologist under direction provided of the BLM.
14. Paleontological Resource Education/Discovery. All persons associated with operations under this authorization must be informed that any objects or sites of paleontological or scientific value, such as vertebrate or scientifically important invertebrate fossils, shall not be damaged, destroyed, removed, moved or disturbed. If in connection with operations under this authorization any of the above resources are encountered the proponent shall immediately suspend all activities in the immediate vicinity of the discovery that might further disturb such materials and notify the BLM authorized officer of the findings. The discovery must be protected until notified to proceed by the authorized officer.

As feasible, the proponent shall suspend ground-disturbing activities at the discovery site and immediately notify the BLM authorized officer of any finds. The BLM authorized officer shall, 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.
15. Range Management Improvements. Range improvements (i.e., fences, gates, reservoirs, pipelines, etc.) shall be avoided during development of natural gas resources to the maximum extent possible. If range improvements are damaged during exploration and development, the operator shall be responsible for repairing or replacing the damaged range improvements. If a new or improved access road bisects an existing livestock fence, steel frame gate(s) or a cattleguard with associated bypass gate shall be installed across the roadway to control grazing livestock.
16. Reclamation. Reclamation goals, objectives, timelines, measures, and monitoring methods for final reclamation of oil and gas disturbances are described in Appendix I (Surface Reclamation) of the 1998 Draft Supplemental EIS (DSEIS). The specific measures described below shall be followed during interim reclamation of disturbed surfaces associated with well pads, access roads, and

pipelines. These measures, except seedbed preparation, shall also apply to temporary reclamation of topsoil storage piles and surfaces that are subject to interim reclamation but not scheduled to undergo interim reclamation for more than 1 year.

- a. Seedbed Preparation. For interim reclamation, all slopes shall be reshaped prior to seedbed preparation. Initial seedbed preparation shall consist of backfilling, leveling, and ripping all areas to be seeded to a minimum depth of 18 inches with a furrow spacing of 2 feet, followed by recontouring the surface and then spreading the stockpiled topsoil evenly. Prior to seeding, the seedbed shall be scarified and left with a rough surface. No depressions shall be left that would trap water and form ponds. Final seedbed preparation shall consist of contour cultivating to a depth of 4 to 6 inches within 24 hours prior to seeding. NOTE: Seedbed preparation is not required for topsoil storage piles or other areas of temporary reclamation.

Requests for use of soil amendments, including basic product information, shall be submitted to the BLM for approval.

- b. Seed Mixes. Selection of seed to be used in temporary or interim reclamation shall comply with the menu-based seed mixes in the letter provided to oil and gas operators dated April 16, 2007. For private surfaces, the menu-based seed mixes are recommended, but the landowner would have ultimate authority over the seed mix to be used in reclamation. The seed shall be certified free of noxious weeds. Seed may contain up to 2.0 percent of "other crop" seed by weight, including the seed of other agronomic crops and native plants; however, a lower percent of other crop seed is recommended. Seed tags or other official documentation shall be supplied to the BLM Glenwood Springs Energy Office Ecologist (Beth Brenneman, 970-947-5232 or beth_brenneman@blm.gov) at least 14 days before the date of proposed seeding for acceptance. Seed that does not meet the above criteria shall not be applied to public lands.
- c. Seeding Procedures. Seeding shall be conducted no more than 24 hours following completion of final seedbed preparation. A seed mix consistent with BLM standards in terms of species and seeding rate for the specific habitat type shall be used on all BLM lands affected by the project (see Attachments 1 and 2 of the letter provided to operators dated April 16, 2007).

Where practicable, seed shall be installed by drill-seeding to a depth of 0.25 to 0.5 inch. Where drill-seeding is impracticable, seed may be installed by broadcast-seeding at twice the drill-seeding rate, followed by raking or harrowing to provide 0.25 to 0.5 inch of soil cover. Hydroseeding and hydromulching may be used in temporary reclamation or in areas where drill-seeding or broadcast-seeding/raking are impracticable. Hydroseeding and hydromulching must be conducted in two separate applications to ensure adequate contact of seeds with the soil.

If interim revegetation is unsuccessful, the operator shall implement subsequent reseeding until interim reclamation standards are met. Requirements for reseeding of unsuccessful temporary reclamation will be considered on a case-by-case basis.

- d. Mulch. Mulch shall be applied within 24 hours following completion of seeding. In areas of interim reclamation that used drill-seeding or broadcast-seeding/raking, mulch shall consist of crimping certified weed-free straw or certified weed-free native grass hay into the soil. Hydromulching may be used in areas of interim reclamation where crimping is impracticable, in areas of interim reclamation that were hydroseeded, and in areas of temporary reclamation regardless of seeding method.

NOTE: As an exception to this provision, mulch is not required in areas where erosion potential mandates use of a biodegradable erosion-control blanket (straw matting).

- e. Erosion Control. Cut-and-fill slopes shall be protected against erosion with the use of water bars, lateral furrows, or other measures approved by the authorized officer. Biodegradable straw

matting, bales or wattles of weed-free straw or weed-free native grass hay, or well-anchored fabric silt fence shall be used on cut-and-fill slopes and along drainages to protect against soil erosion. Additional BMPs shall be employed as necessary to reduce erosion and offsite transport of sediment.

- f. Site Protection. The pad shall be fenced to BLM standards to exclude livestock grazing for the first two growing seasons or until seeded species are firmly established, whichever comes later. The seeded species will be considered firmly established when at least 50% of the new plants are producing seed. The authorized officer will approve the type of fencing.
 - g. Monitoring. The operator shall conduct annual monitoring surveys of reclaimed areas and shall submit an annual monitoring report to the authorized officer by December 31 of each year. The monitoring program shall use the four Reclamation Categories defined in Appendix I of the 1998 DSEIS to assess progress toward reclamation objectives. The annual report shall document whether attainment of reclamation objectives appears likely. If one or more objectives appear unlikely to be achieved, the report shall identify appropriate corrective actions. Upon review and approval of the report by the BLM, the operator shall be responsible for implementing the corrective actions or other measures specified by the authorized officer.
17. Weed Control. The Operator shall regularly monitor and promptly control noxious weeds or other undesirable plant species as set forth in the Glenwood Springs Energy Office *Noxious and Invasive Weed Management Plan for Oil and Gas Operators*, dated March 2007. A Pesticide Use Proposal (PUP) must be approved by the BLM prior to the use of herbicides.
 18. Facility Placement and Color. The paint color to be used on all surface facilities including the metal containment rings surrounding the tank batteries is Shale Green (5Y 4/2). EnCana's storage tank(s) on the pad shall be placed within the southwest corner of pad with production pack set no more than 100 feet from well heads or tanks. Tank placement shall be conducted in manner so that tanks are not placed directly against the cut slope – suitable space between cut slope and tanks must be provided for maximum reclaimed area.
 19. Remote Monitoring. Remote monitoring shall 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.

APPENDIX B

DOWNHOLE CONDITIONS OF APPROVAL

CONDITIONS OF APPROVAL
APPLICATION FOR PERMIT TO DRILL

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

		Pad Location	SWNE Sec 32, T07S, R92W	
Well Name	Well No.	API No.	Bottom Hole Location	Lease
HMU	32-3 (G32E)		NENW Sec 32 T07S, 92W	COC56258
MCU	32-7 (G32E)		SWNE Sec 32 T07S, 92W	COC69618

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 pre and post spud.
- 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 Steve Ficklin (970)947-5213 or Jennifer Gallegos (970)947-5220 of the Glenwood Springs Energy office at least twenty-four (24) hours pre and post spud and at least 24 hours prior to running casings and conducting the BOP test.

**DOWNHOLE CONDITIONS OF APPROVAL FOR
APPLICATION FOR PERMIT TO DRILL
FEDERAL (G32E) PAD**

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

	Minimum TOC	
<u>Well No.</u>	<u>MD</u>	<u>TVD</u>
32-3 (G32E)	3961 feet	3778 feet
32-7 (G32E)	3675 feet	3653 feet

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.

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	C: 970.319.5837
Petroleum Engineer	W: 970.947.5221

Steve Ficklin	W: 970.947.5213
Petroleum Engineering Tech.	C: 970.319.2509

Jennifer Gallegos	W: 970.947.5220
Petroleum Engineering Tech.	C: 970.319.2211

Jim Byers	W: 970.947.5222
Natural Resource Specialist	

BLM Fax: 970.947.5267

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, spend 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.