

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

ENVIRONMENTAL ASSESSMENT

NUMBER: CO-140-2005-132 EA

CASEFILE NUMBER: Lease # COC-67090

PROJECT NAME: Proposal to Drill 1 Exploratory Well from proposed PH1 Well Pad south of Pete and Bill Creek and obtain pipeline right-of-way (Benefiting program, Fluid Minerals 1310)

LEGAL DESCRIPTION:

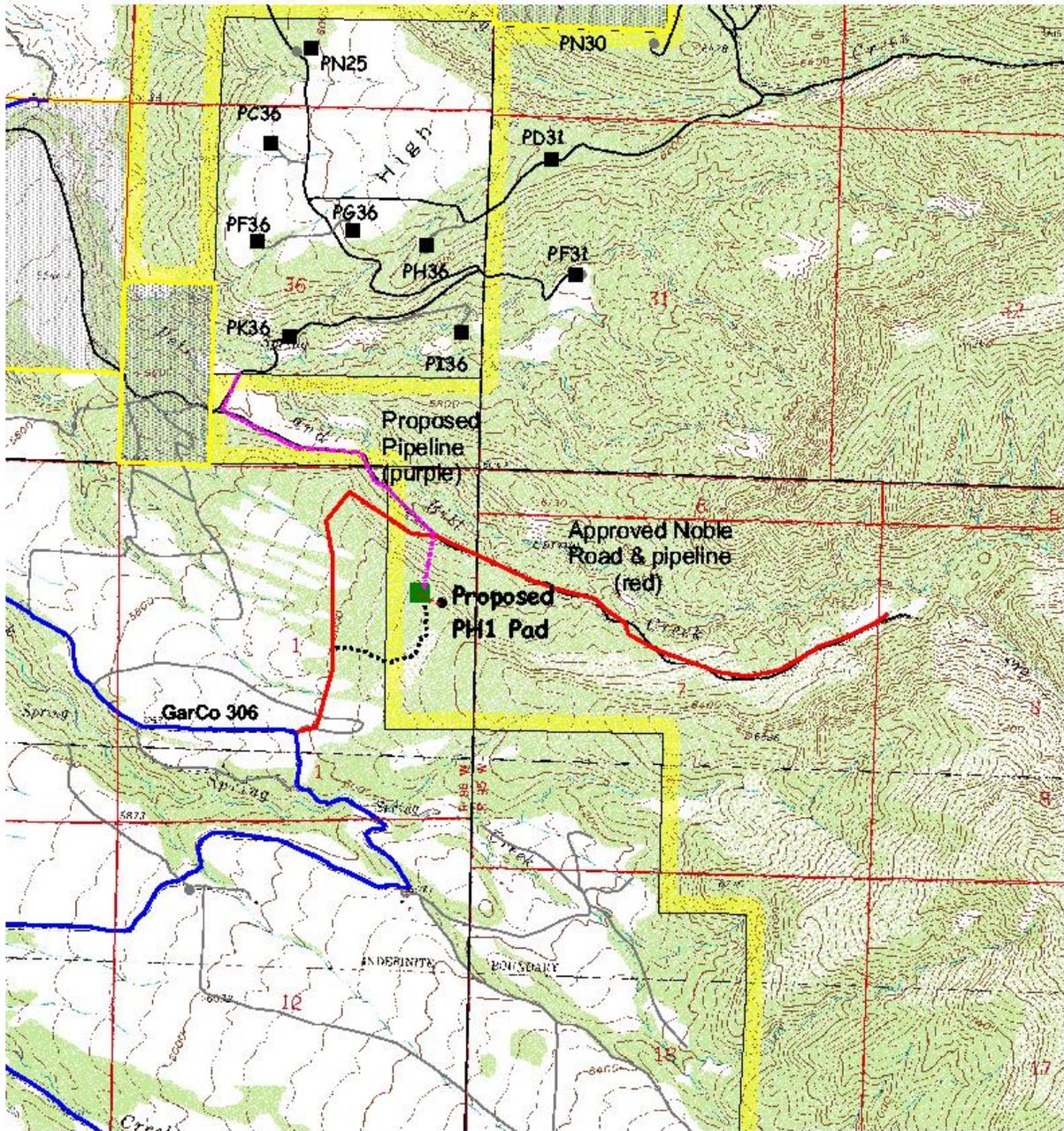
Federal 1-8 Surface location: T8S, R96W, Sec 1, SE $\frac{1}{4}$ NE $\frac{1}{4}$, 6th P.M.
(PH1 Pad) Bottom Hole: T8S, R96W, Sec 1, SE $\frac{1}{4}$ NE $\frac{1}{4}$, 6th P.M. (2067' FNL, 691' FEL)
Surface Owner: BLM
Federal Lease: COC-67090

APPLICANT: EnCana Oil & Gas (USA) Inc.

DESCRIPTION OF PROPOSED ACTION AND ALTERNATIVES

Proposed Action: The proposed action would allow the operator to directionally drill and develop one federal natural gas well from a proposed BLM well pad as listed above and shown on Project Map. The well pad, with a surface disturbance of 4.1 acres, would be situated in mixed pinon-juniper/sagebrush/mountain brush vegetation on mesa 1800 feet south of Pete and Bill Creek. The site has mature juniper trees with scattering of small (< 8 feet in height) pinon trees in the understory. A new access road (approx 1875 feet length, 20 foot width, crowned and ditched road) would be constructed to the pad with ingress from Garfield County Road 306 crossing private and BLM lands. Road grade would not exceed 8%. Sideslopes along the entire proposed road average less than 15%. Public motorized access is not available to the area of public lands.

Although the access road to pad would originate from CR 306, the natural gas (6" diameter) and water gathering (4" diameter) flowlines for this well would tie with existing EnCana 20" pipeline located in Section 36, T7S R96W on a different alignment than the access road. The flowlines would be installed as surface pipeline from PH1 pad north traversing steep slope for about 750-1000 feet with minimal construction impact. An excavator and/or dozer would be used to pull the lines along the surface feeding them from the PH1 pad with a clearing width not to exceed 20 feet. Near the proposed flowline crossing of Noble's SP22-8 access road, the flowlines would be buried in alignment that follows the existing 2 track route down Pete and Bill Creek to connection point with EnCana's 20" gas pipeline and water gathering system. Total pipeline length would be 6600 feet from PH1 pad to connecting point in Section 36. Buried pipeline right-of-way width would be 30 feet expanded to 55 feet during construction; length would be approximately 3000 feet (pending final survey plat submittal).



EnCana's Proposed PH1 Pad w/ 1 directional well

**T8S R96W Sec 1 SE¼NE¼, 6th P.M.
Garfield County, CO**

Surface Owner: BLM



Scale 1 : 24,000

11/14/05

The portion of proposed flowlines within Sec 36 would be authorized under BLM rights-of-way #COC-69292 and #COC-69292A (see Project Map). Estimated total disturbed area tied to this proposed action would be 13.7 acres (well pad accounting for 4.1 acres, access road covering 1.3 acres and flowline disturbing 8.3 acres).

The exploratory well qualifies as a GAP waiver as defined in Appendix B of the 1999 SEIS. Any additional wells planned for this location would be addressed in the proposed South Parachute GAP planned for NEPA preparation in fall, 2005.

The proposed action includes drilling and completion operations, installation of production facilities (pipeline, separator/dehydrator, water tank, etc.), production of natural gas, and intermediate and final reclamation measures. The Application for Permit to Drill (APD) includes a drilling program and a multi-point surface use and operations plan that describe details of well pad construction and reclamation. The proposed action will be implemented consistent with the oil and gas lease (listed above), federal regulations (43 CFR 3100), the Record of Decision and Resource Management Plan Amendment March 1999, and the operational measures included in the APD as well as the Conditions of Approval (COA) attached to the APD.

Description of Lease Stipulations that apply to Proposed Action and/or Alternative:

PH1 pad COC58674: No special stipulations are listed in the lease language.

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

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

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

Name of Plan: Glenwood Springs Resource Management Plan.

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

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

Decision Language: The FSEIS described the environmental effects, including the cumulative effects, of oil and gas development, but did not authorize the construction of any individual well locations. This EA is more site-specific than the FSEIS and includes the results of the on-the-

ground inventories for cultural resources and special status plant and animal species, if appropriate. This EA tiers to both the DSEIS and FSEIS and the information in the FSEIS is incorporated by reference. The EA will focus on specific issues and will not deal with the larger regional issues addressed in the FSEIS. The proposed action has been reviewed for and is in compliance with the FSEIS (43 CFR 1610.5, BLM 1617.3) - Page or Decision Number: Pages 1-5, Record of Decision dated March 24, 1999.

Standards for Public Land Health: In January 1997, Colorado Bureau of Land Management (BLM) approved the Standards for Public Land Health. The Glenwood Springs Field Office is in the ongoing process of completing Land Health Assessments on a landscape basis. A formal Land Health Assessment was completed on the lands affected by the actions addressed in this EA in 2001. Portions of these lands were found not to be meeting the Standards. Specific concerns related to the condition of the sagebrush and pinyon-juniper habitats that comprise important big game winter range. Many sagebrush stands were in poor condition with old, decadent and severely hedged shrubs and little recruitment and establishment of younger age-class plants. In some sagebrush and pinyon-juniper stands, understory vegetation was lacking or was dominated by cheatgrass. Based on the findings of this assessment, specific mitigation and reclamation practices will be required on the proposed action to move toward achieving conformance with the standards.

The five standards cover upland soils, riparian systems, plant and animal communities, threatened and endangered species, and water quality. Standards describe conditions needed to sustain public land health and relate to all uses of the public lands. Because a standard exists for these five categories, the impact analysis must address whether the proposed action or any alternatives being analyzed would result in impacts that would maintain, improve, or deteriorate land health conditions for that specific parameter. These analyses are located in specific elements listed below:

AFFECTED ENVIRONMENT / ENVIRONMENTAL CONSEQUENCES / MITIGATION MEASURES:

CRITICAL ELEMENTS

Air Quality

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

Environmental Consequences: The Draft Roan Plateau EIS, pages 4_31-4_48, describes potential effects from oil and gas development. Analysis was completed with regard to greenhouse gas emissions, a near-field and far-field analysis for carbon monoxide, particulate matter (PM₁₀ and PM_{2.5}), sulfur dioxide, hazardous air pollutants including: benzene, ethylbenzene, formaldehyde, hydrogen sulfide, toluene, and xylenes. Sulfur and nitrogen deposition analysis, acid neutralizing capacity, and visibility screening-level analysis were also completed in the Draft EIS. Findings indicate that no adverse long term effects would be realized under the Draft Roan Plateau EIS plan. It is anticipated that the proposed action in this document would not likely produce adverse effects to air quality when compared to the Roan Plateau plan.

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

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

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

Affected Environment: There are no Wilderness Areas or Wilderness Study Areas, citizen proposed wilderness areas, ACECs, or Wild and Scenic Rivers within the proposed project area.

CULTURAL RESOURCES

Affected Environment: Two separate cultural resource inventories (GSFO# 5406-5 and 14606-1) have been conducted. The first was completed for the well location and access; the second was completed for the pipeline. Two historic properties were identified that are eligible for listing on the National Register of Historic Places.

Environmental Consequences/Mitigation: This project has been redesigned to avoid the historic properties. Therefore, formal consultation was not initiated with the Colorado State Historic Preservation Officer and a determination of “**No Historic Properties Affected**” was made based upon results of the inventories, the BLM/SHPO National and Colorado Protocols (1997 and 1998) and National Historic Preservation Act (16 U.S.C. 470f).

Indirect long term cumulative impacts from increased access and personnel could result in a range of impacts to known and undiscovered cultural resources in the vicinity of the location, from illegal collection and excavation to vandalism.

The importance of the Education/Discovery Stipulation needs to be stressed to EnCana and their subcontractors informing them of their responsibilities to protect and report any cultural resources encountered on public land during operations under this permit.

- The well pad is to be fenced and all personnel are restricted to the authorized well pad, access road, and pipelines during all phases of construction, development, and maintenance.
- A standard Education/Discovery Condition of Approval for Cultural Resource protection will be attached to the APDs.

ENVIRONMENTAL JUSTICE

Affected Environment: Review of 2001 data from US Census Bureau indicates the median annual income of Garfield County averages \$43,560 and is neither an impoverished or wealthy county. Median annual income of Eagle County averages \$51,578 and is not impoverished but is considered a wealthy county. U.S. Census Bureau data from July, 2002 shows the minority population of Garfield and Eagle County comprises less than 3 % of the total population¹.

Garfield County	Eagle County
Median Household Income	Median Household Income

¹ Table CO-EST2002-ASRO-02-08-County Population Estimates by Race Alone and Hispanic or Latino Origin: July 1, 2002
Source: Population Division, U.S. Census Bureau
Release Date: September 18, 2003

Estimate	90% Confidence Interval	Estimate	90% Confidence Interval
\$43,560	\$40,491 to \$46,613	\$51,578	\$47,958 to \$55,177

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

FARMLANDS, PRIME AND UNIQUE

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

FLOODPLAINS, WETLANDS, RIPARIAN ZONES

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

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

INVASIVE, NON-NATIVE SPECIES

Affected Environment: The proposed pad, access road, and pipeline lie predominantly in a pinyon-juniper woodland with some sagebrush/mountain brush community in openings and clearings. Herbaceous cover is comprised of native grasses and forbs, and the noxious weed, cheatgrass. No surveys for noxious weeds have been done in the project area, so it is unknown whether other noxious weeds exist. Noxious weeds such as Canada thistle and leafy spurge are known to occur on private lands to the south of the project area.

Environmental Consequences/Mitigation:

Surface-disturbing activities provide a niche for the invasion or expansion of noxious weeds. The risk of cheatgrass becoming dominant on the site following disturbance is high, since cheatgrass is already present in the vicinity. Other noxious weeds adjacent to the project area may also pose a risk of invasion.

Mitigation:

The APDs and Conditions of Approval include measures to re-vegetate the well site with native perennial grasses, forbs and shrubs. The project proponent will adhere to the specified seed mix and will continue with reclamation activities, including reseeded if necessary, until BLM’s interim reclamation objectives are achieved. The project proponent will also be required to monitor for the presence of any County or State-listed noxious weeds at least once each year during the growing season for the life of the well. In addition, a standard Condition of Approval is attached requiring the project proponent to promptly treat and control any invading noxious weeds. A Pesticide Use Proposal must be approved by BLM prior to commencing any herbicide spraying.

MIGRATORY BIRDS

Affected Environment: The proposed road, well pad, and pipeline are located within pinon-juniper woodlands, and mixed mountain brush vegetation. The understory is comprised of various grasses and forbs. Given this mix of vegetation, the project areas provide cover, forage, and nesting habitat for a variety of migratory birds. A few species listed on the U.S. Fish and Wildlife Service’s Birds of Conservation Concern list may be present. Within the mixed mountain shrublands and oakbrush,

Virginia's warbler may occur. This species is a ground nester that requires dense shrub cover such as that found in the project area. Within the pinon-juniper woodlands, the black-throated gray warbler, gray vireo, and pinyon jay may reside. These birds are all tree nesting species.

No raptor nests occur in the immediate vicinity of the proposed access road, pipeline, and well pad. However, golden eagles are known to nest in the nearby area. It is likely that these and other raptors forage on and near the proposed access road, pipeline, and well pad.

Environmental Consequences: The proposed action will result in the loss of approximately 13.7 acres of pinon-juniper woodland and mixed mountain shrubland habitat to accommodate the new access road, pipeline, and well pad. This will result in losses of cover, forage, and nesting habitat for migratory birds. If vegetation is cleared during the spring nesting season, it is possible that nests and/or eggs will be destroyed. This would result in reduced productivity. Impacts would likely be confined to individual birds and should not result in quantifiable impacts at the population or species level. Habitat will cease to function in its current capacity as larger trees and shrubs are replaced by grasses and forbs on reclaimed areas. The access road and well pad will also result in fragmentation of habitats and will reduce habitat connectivity and habitat patch size in the area. It is also likely that during road, pipeline, and pad construction, and drilling and completion activities, individual birds will be displaced to adjacent habitats due to noise and human presence, as will prolonged road use associated with field development. Raptors should be minimally affected as upland foraging habitat is plentiful in the area.

NATIVE AMERICAN RELIGIOUS CONCERNS

Affected Environment: At present, no Native American concerns are known by the GSFO within the project area. While two historic properties were identified during the inventories, they are outside the area of potential impact. The Ute Tribes claim the area as part of their ancestral homeland. If new data is disclosed by the Ute Tribes, new terms and conditions may have to be negotiated to accommodate their concerns.

Environmental Consequences/Mitigation: Indirect impacts from increased access and personnel could result in a range of impacts to unknown cultural resources from illegal collection to vandalism. The importance of the Education/Discovery Stipulation needs to be stressed to EnCana and their subcontractors.

- The well pad is to be fenced and all personnel are restricted to the authorized well pad, access road, and pipelines during all phases of construction, development, and maintenance.
- A standard Education/Discovery Condition of Approval for Cultural Resource protection will be attached to the APD.

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

Affected Environment: According to the latest species list from the U. S. Fish and Wildlife Service, the following federally listed and candidate species may reside or be impacted by actions occurring in Garfield County: bald eagle, Canada lynx, Mexican spotted owl, black-footed ferret, Uinta Basin hookless cactus, Parachute beardtongue, DeBeque phacelia, boreal toad, yellow-billed cuckoo, razorback sucker, Colorado pikeminnow, bonytail chub, and humpback chub.

Specific to the project location, no federal or state listed species, federal proposed or candidate species, or their habitat occur directly at the project site. In addition the area of the proposed action is not considered to provide potential habitat for any BLM Sensitive plant or animal species. Although the BLM Sensitive plant, Harrington's penstemon, is known to occur several miles to the east of the project

area near Spruce Gulch, the elevation of the project area (6,200 feet) is below the elevational range of Harrington's penstemon and the soils are different than at other known sites.

Environmental Consequences/Mitigation: Based on the lack of potential habitat or occurrence records for any federally listed or BLM Sensitive species, the proposed action should have “**No Effect**” on any listed or BLM Sensitive species or their habitats. In addition, no indirect or offsite impacts are anticipated.

Analysis on the Public Land Health Standard for Threatened & Endangered species: Since there is no potential habitat for special status species in the project area and no known occurrences within the vicinity, the proposed action should have no effect on any special status species. The proposed action should not result in a failure of the area to achieve Standard 4 for threatened, endangered, or other special status species.

WASTES, HAZARDOUS OR SOLID

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

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

Affected Environment:

Surface Water: The proposed access road, flowline and well pad lie on a mesa and northeast-facing slopes approximately 900 feet south and west of ephemeral Pete and Bill Creek which drains into the Colorado River above Una Bridge west of Parachute, Colorado. The proposed action area lies in three sub-watersheds. Approximately 350 ft of the southwest end of the road lies in the Spring Creek sub-watershed, with approximately 3050 feet of the middle portion of the road in the Colorado River Sub-watershed, and the remaining 150 feet of road and pad lying in the Pete and Bill Creek Sub-watershed. These Sub-watersheds drain into the Colorado River Watershed located below Rifle, Colorado. This section of the Colorado River is classified as aquatic life warm class 1, recreation class 1a, water supply and agriculture. .

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

The potentially affected drainage is subject to flow events from short duration, high intensity thunderstorms during summer months. Winter and spring runoff also plays a role in this watershed depending on snowfall and spring rain events.

Ground Water: Numerous water wells are found nearby in the Spring Creek/Pete and Bill Creek area. The water wells are generally less than 30 feet in depth, with most completed in alluvial deposits, including alluvial terrace gravels. Some of the wells may penetrate water zones in the lenticular sandstones of the Wasatch Formation. No "regional" bedrock aquifer is known to be present.

Environmental Consequences/Mitigation:

Surface Water: Access road and pad construction would result in the removal of vegetation and disturbance of soils that would increase sediment and salinity in surface water in the area. There is some risk that the impact to surface waters would be greater than anticipated should a high intensity thunder

storm hit immediately following the surface disturbing activity and before mitigating measures are in place. With measures to control runoff water in place, reestablishment of vegetation, and proper engineering of roads, the increase in the amount of sediment in surface waters would be minimized. Culverts in road crossings of drainages would be required to pass a 25 year 6 hour storm event and would be installed during no flow or low flow conditions. Water produced during drilling activity would be contained in an engineered pit on the pad site and evaporated or hauled to a disposal facility.

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

Since the proposed action would disturb greater than 5 acres in total, stormwater permitting is required through the State of Colorado's Water Quality Control Commission. The following mitigation will be required as a condition of approval.

- EnCana Oil & Gas (USA) Inc. will consult the State of Colorado Water Quality Control Division (for stormwater permits) prior to commencing construction activities related with said permit within the proposed action area. Written documentation to the Authorized Officer is required to indicate that appropriate permits have been obtained or are not required by the permitting agencies.

Ground Water: The operator will set and cement surface casing to 1500 feet, and cement the production casing back to the base of the surface casing, which will protect all potentially usable water zones.

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.

NON-CRITICAL ELEMENTS

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

SOILS (includes analysis on Standard 1)

Affected Environment: The proposed action would include the construction of new access road and well pad and installation of surface and buried pipelines creating a total surface disturbance not to exceed 13.7 acres. The general soil map from the Soil Survey of Rifle Area, Colorado indicates that the proposed road and pad cover three soil map units, described below:

- Approximately 1,150 feet of the southwest end of the proposed road lies on Potts loam (6 to 12% slopes) which is a deep, well drained soil typically found on mesas, benches and valley sides. The surface runoff is medium and the erosion hazard is severe. Primary uses on this soil are grazing, wildlife habitat, and some dry-land farming.
- Approximately 2,150 feet of the central portion of the proposed road lies on Potts-Ildefonso complex (12 to 25% slopes) which is a strongly sloping to hilly soil unit found on mesas, alluvial

fans and valley sides. Both of these soils are described as having medium surface runoff and moderate erosion hazards. Primary uses on this soil include limited grazing and wildlife habitat.

- The remaining northeast portion of the road (approx. 215 feet) and pad lie on Ildefonso stony loam (6-25% slopes). This unit is described as a deep well drained, moderately sloping to hilly soil typically found on mesas, benches, and valley sides. Erosion hazards are described as medium and surface runoff is described as moderate. Typical uses for this map unit are wildlife and grazing.

Environmental Consequences/Mitigation: There would be some loss of soil, some loss of soil productivity, and an increase in sedimentation resulting from construction of the well pads. The extent of these impacts on soils would not be great and would be expected to last for a relatively short period of time. The proposed action includes measures to prevent direct placement of fill material in drainages, limits reclaimed slopes to 3:1, and to re-vegetate disturbed areas. Reclamation measures such as contouring disturbed areas, roughing the soil surface, re-vegetating, and controlling runoff would help to limit soil erosion. The loss of soil and increased sedimentation would occur after the construction phase for a short term of from 1 to 3 years until re-vegetation occurs. There would be some minor permanent loss of soil. The mitigation in the water quality section of this document would aid in protecting soil resources in the proposed action area. In conjunction with mitigation proposed in the water quality section of this document, road construction will be subject to, at minimum, the following mitigation.

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

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

VEGETATION (includes analysis on Standard 3)

Affected Environment: The proposed pad, access road, and pipeline lie predominantly in a pinyon-juniper woodland with some sagebrush/mountain brush community in openings and clearings. Herbaceous cover is comprised of native grasses and forbs, and the noxious weed, cheatgrass. Live pinyon trees would be impacted during the road construction so the Ips beetle problem could be exacerbated by this action.

Environmental Consequences: Total acreage associated with the disturbance would be approximately 13.7 acres. The proposed action would result in a long-term loss of vegetation associated with the access road and operating facilities for the life of the well and a long-term modification of vegetative structure, species composition and extent of cover types throughout the project area. The proposed action would also result in a short-term loss of herbaceous and shrubby vegetation and a long-term loss of mature to old-growth juniper trees on those portions of the pad and road that will be revegetated following completion of drilling activities. With implementation of reclamation practices identified in the COAs, it is estimated that native, perennial herbaceous vegetation would re-establish within 2-3 years. Shrub species would take at least 8-10 years to recover, while recovery of mature Utah juniper would take more than 100 years. Monitoring of the reclamation would occur as identified in the COAs.

Mitigation:

The operator will individually cut and chip all pinon trees that would be cleared or destroyed by the project proposal. The PH1 pad will be fenced to exclude livestock grazing for the first two growing seasons or until the seeded species become firmly established. When 50% of the seeded species are producing seed, this will be considered evidence that the seeded species have become firmly established.

Analysis on the Public Land Health Standard for plant and animal communities (partial, see also Wildlife, Aquatic and Wildlife, Terrestrial): The Battlement Mesa Land Health Assessment determined that this portion of the landscape was functioning but that problems were evident. Problems noted were dominance of the area by cheatgrass, heavily hedged and decadent sagebrush and conifers that appeared stressed. The recent drought is probably a contributing factor in the susceptibility of the stand to Ips beetle infestation. Any pinyon trees that would be damaged or destroyed as a result of the proposed action would be chipped to minimize the potential for attracting Ips beetles to the site. The surface disturbance associated with the proposed action has the potential to encourage expansion and dominance of the site by cheatgrass. The Invasive, Non-native Species section includes provisions to revegetate the disturbances with native vegetation and to control noxious weeds.

With implementation of the COAs and fencing of the pads to exclude livestock grazing, the proposed action should not result in a failure of the landscape to meet Standard 3 for healthy plant communities.

WILDLIFE, AQUATIC (includes analysis on Standard 3)

Affected Environment: There are no perennial aquatic systems located directly near the proposed access road or well pad. However, the proposed access road and well pad lie along the north-facing slopes of ephemeral Pete and Bill Creek, which flows into the Colorado River above Una Bridge west of Parachute, Colorado. This stream in the vicinity of the proposed action contains no aquatic wildlife as it is dry much of the year.

Environmental Consequences/Mitigation:

It is likely that site-specific erosion potential will be increased due to clearing of vegetation to accommodate the new access road and well pad. Road cut and fill amounts will be moderate due to side slopes that average under 30%. The excavation work for the pad is well-balanced with maximum cut of 21.1 feet and fill of 15.7 feet. The proposed action calls for the establishment of desirable species on excavated slopes to help retain and stabilize soils and initiate revegetation. This will help to minimize erosion and sedimentation concerns. Increased sediment can reduce aquatic insect productivity as streams become silted and clean gravels and cobbles are covered. Sediment that ultimately reaches the Colorado River will have no impacts to fisheries as sediment levels are projected to be well within the background levels for the Colorado River and minor potential increases in sediment would be undetectable.

Analysis on the Public Land Health Standard for plant and animal communities (partial, see also Vegetation and Wildlife, Terrestrial): A formal land health assessment was completed in 2001. The proposed action should result in no negative effects to aquatic wildlife and will have no negative effects on the ability to maintain or meet Standard 3 for aquatic wildlife.

WILDLIFE, TERRESTRIAL (includes analysis on Standard 3)

Affected Environment: The proposed access road, flowline and well pad are located in mapped big game winter range that has been identified as High Value Habitat. However, the federal lease does not contain any language referring to big game winter timing limitations. Therefore, a 60-day Condition of Approval (COA) will be invoked for the well pad activities in order to provide some protection to wintering big game in the area. Compliance with this timing limitation will reduce but not eliminate

impacts to wintering big game by limiting well pad construction, drilling, and all completion activities during a 60-day period of the critical winter months – January 15 through March 15.

Because the operator must apply for pipeline right-of-way across BLM lands in Section 36, the standard 5 month (12/1-4/30) restriction would be stipulated in the pipeline right-of-way per BLM's Oil & Gas FSEIS approved in 1999. This stipulation would effectively restrict any pipeline construction work during the winter period identified above. In addition to big game, a variety of small game and non-game wildlife, birds, reptiles, and amphibians are found in the vicinity of the proposed access road and well pad. The area is prime foraging habitat for black bears. Habitat in the area is very high quality and is relatively undisturbed other than for seasonally used two-track roads. General impacts (short term, long term, and cumulative) to terrestrial wildlife were adequately addressed in the 1999 FSEIS.

Environmental Consequences: The proposed action will result in the loss of approximately 13.7 acres of upland vegetation/habitat. This will result in losses of forage, and cover for many wildlife species. In addition, the action will result in habitat fragmentation and will reduce habitat patch size and connectivity. This can benefit some generalist species while impacting other specialized species. Creation of edge habitat can be good, but the human intrusion component related to road use for construction, drilling, completion and potential production activities will displace some wildlife species away from the preferred habitats in the area. Standard measures are incorporated into the APD along with other measures (i.e., automatic well reporting, and reclamation) to conform to the FSEIS that will help to mitigate some wildlife impacts.

Mitigation:

No road or pad construction, drilling, or completion work including all surface completion, pipeline construction, movement of equipment, etc., will be allowed from January 15 to March 15, in order to protect wintering big game. For pipeline construction, the following term language will be added to right-of-way: "To minimize impacts to wintering big game, the winter timing limitation will be invoked on the pipeline right-of-way that crosses BLM which will allow no pipeline construction from December 1 to April 30."

Analysis on the Public Land Health Standard for plant and animal communities (partial, see also Vegetation and Wildlife, Aquatic): A formal land health assessment was completed in the area in 2001. The area was generally meeting Standard 3 for terrestrial wildlife at that time. With increased natural gas development activity, habitats in the area are becoming increasingly compromised. Increased vehicular traffic and human activity will result from the drilling of wells in this remote area. The action will trend the area away from meeting Standard 3 for terrestrial wildlife species. .

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

The road and well density thresholds will not be exceeded via implementation of the proposed action. As such offsite or replacement mitigation measures to reduce impacts to wildlife are not currently being considered. However, if this exploratory well is productive, and future activity increases in the area, a

Geographical Area Plan (GAP) will likely be initiated. At that time, it is possible that mitigation will be sought to offset habitat loss and fragmentation. Cumulative impacts will be addressed in greater detail in the GAP document and mitigation opportunities will be identified and pursued.

OTHER NON-CRITICAL ELEMENTS:

ACCESS AND TRANSPORTATION

Environmental Consequences: Motorized public access exists within the project area as Noble's SP22-8 well access road provides field development access near the proposed well pad and to portions of proposed pipelines. Furthermore, existing 2-track route provides physical access to most of the proposed buried pipeline route. Both access points, however, are controlled by adjacent private lands and public motorized access is not available to the project area.

The proposed new road and pipeline route would change the type, frequency and amount of motorized use in the project area since the road standard would be upgraded significantly from the jeep trail that presently exists. The present travel designation for the area is "Open" to travel on and off road. Truck traffic related to lease development will be the heaviest during rig-up, completion activities, and the rig-move to the pad location. The proposed drilling and completion activities on the federal wells will likely commence in fall 2005.

Mitigation: Existing 2 track route which parallels the proposed buried pipeline alignment would be reclaimed and put to bed.

GEOLOGY AND MINERALS

Affected Environment/Environmental Consequences/Mitigation:

The target gas zones for the proposed directional well are sands within the middle and lower part of the Williams Fork Formation, and possibly sands within the underlying Iles Formation. The shallower Wasatch G sands may contain gas, but are not an economic target at present. The wells will reach total depth near the base of the Corcoran Sandstone (Iles Formation). All coal zones are too deep for underground mining. The operator proposes to cement the production casing from TD back to the base of the surface casing, which would isolate the formations and protect all potentially producible gas zones.

NOISE:

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

PALEONTOLOGY

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

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

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

RANGE MANAGEMENT:

Affected Environment: The proposed gas well, access road, and pipelines would be located on public land within the Dry Creek Pete & Bill Allotment # 08125. The table below summarizes the permitted grazing use on the allotments.

Allotment	Permittee	Livestock Kind & NO.	Season of Use	% PL	AUMs
Dry Creek Pete & Bill # 08125	Sharon Gardner	Cattle 36	05/01 – 06/15	100	54
		Cattle 36	10/01 – 10/31	3	1
		Cattle 10	10/01 – 10/31	100	10
		Cattle 10	10/01 – 10/31	100	10
	John & Phyllis Hyrup	Cattle 182	05/01 – 06/15	100	51
		Cattle 182	06/16 – 10/15	3	22

Environmental Consequences: Estimated total disturbed area tied to this proposed action would be 13.7 acres. Construction of the proposed well pad, access road, and pipeline would destroy no more than 1 AUM of livestock forage on the Dry Creek Pete and Bill Allotment. Rehabilitation of vegetation on the location would result in reestablishment of forage on most of the disturbed area within 3 years. There would be some minor long term loss of vegetation in the construction area where gas facilities and working surfaces would be located. Livestock may also be minimally disturbed by the increase in human activity during construction and maintenance of gas facilities.

Mitigation: It is not anticipated that the level of impacts from implementation of the proposed action would require adjustment of the livestock stocking rate. The level of forage utilization will be monitored on the allotment. If necessary, adjustments in livestock use will be made to protect land health. Fencing of the pad will be required to deter grazing impacts to reclaimed pad areas

Any range improvements inadvertently damaged during construction of the proposed project will be repaired or replaced by the operator.

VISUAL RESOURCES

Affected Environment:

The proposed PH1 pad is located within an area classified as VRM Class IV in the 1984 Glenwood Springs Resource Management Plan. The objective of this class is to provide for management activities which require major modifications of the existing character of the landscape. The level of change to the characteristic landscape can be high. These management activities may dominate the view and be the major focus of viewer attention. However, every attempt should be made to minimize the impact of these activities through careful location, minimal disturbance, and repeating the basic elements.

Currently, the existing landscape consists of densely forested pinon/juniper hill sides largely undisturbed or modified. One road which follows the drainage of Pete and Bill Creek is only intermittently visible as it follows the topography. Energy related development has occurred on adjacent private and BLM lands.

However, much of the landscape character has been maintained, and development does not dominate the landscape.

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

Environmental Consequences/Mitigation: The proposed pad lies within mixed pinon/juniper-mountain brush vegetation and would create a contrast in color, line, shape and texture. Large cut and fills also create contrast by introducing new colors, shapes and forms into the existing landscape. Interim reclamation of the well pads with seeded shrub and grass species would reduce the contrast after two to three growing seasons. After completion and reclamation, long term impacts from the pad are expected due to the removal of the trees and the presence of production facilities.

In conformance with BLM Best management Practices linear alignments for pipelines, flowlines and waterlines should respect the forms and lines of the existing landscape thereby minimizing visual conflicts. Keeping the flowline and waterline on the surface (coming off the pad going down the hill) will eliminate or minimize a high degree of contrast that would result from a straight line clearing against the natural lines of the topography straight down the densely vegetated slopes. If the proposed action is modified in any way that would include subsurface disturbance down the slope to Pet and Bill Creek a new route should be located that would better follow the topography and repeat existing lines found within the landscape.

Due to the existing landscape characteristics and dominant dense vegetation cover the following mitigation is attached to conform with BLM BMPs and to minimize the impact of these activities through careful location, minimal disturbance, and repeating the basic elements.

With the mitigation listed below the proposed action would meet VRM Class IV objectives.

Mitigation:

The production facilities located on the pad in support of the existing well have been painted conforming environmental colors as specified in the COAs or lease terms. The additional well facilities including the metal containment ring will be painted Shale Green, based on on-site recommendations. Efforts should be made to leave as much existing vegetation as possible to screen the excavated disturbance. The facilities should be placed against the cut side of the pad, where feasible. If proposed action is modified to include subsurface waterline and/or flowline (portion coming off the pad connecting to road at Pete and Bill Creek) a new route must be located that follows natural lines within the topography.

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

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

Hydrology/Water Rights		X	
Law Enforcement	X		
Paleontology			X
Noise			X
Range Management			X
Realty Authorizations		X	
Recreation	X		
Socio-Economics		X	
Transportation		X	
Visual Resources			X

CUMULATIVE IMPACTS SUMMARY:

The 2004 Draft Roan Plateau Resource Management Plan Amendment & Environmental Impact Statement released in November, 2004 (DEIS, 2004) analyzed 5 alternatives for oil and gas development in the Roan Plateau planning area. These alternatives assessed impacts, including cumulative impacts, for oil and gas development scenarios ranging from 855 to 1582 new gas wells on public lands. The drilling of the wells addressed in this Environmental Assessment is well below the low range of development analyzed in the DEIS.

Since the completion of the 1999 Oil and Gas Leasing and Development FSEIS, the number of wells analyzed in subsequent NEPA documents has exceeded the 230 federal wells forecast in the RFD for lands outside the NOSR Production Area. However, drilling technology advancements has drastically reduced the expected surface disturbance of 3.4 acres per well or 1,020 acres from Federal wells analyzed in the 1999 FSEIS. The FSEIS analysis was based on a reasonably foreseeable development scenario, including the numbers of wells, well spacing, equipment necessary, and assumed emission rates. Since completion of the FSEIS, the majority of new wells have been drilled directionally and, in many instances, are being drilled from existing well pads, thereby reducing the overall anticipated surface impact addressed in the 1999 FSEIS.

The air quality analysis conducted in the 2004 DEIS does assess the impacts to the airshed from oil and gas development within and around the Roan Plateau Planning Area. The proposed action addressed in this document, which could include well pad and/or road construction, well drilling and well completion work typical for oil and gas development, would not represent a significant increase in emissions relative to the emissions assumed in the 2004 DEIS

PERSONS / AGENCIES CONSULTED:

Joe Schmid – EnCana construction foreman
Dayton Slauch – EnCana surveyor (Tri-State)

INTERDISCIPLINARY REVIEW:

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

Bruce Fowler
Jim Wilkinson
Mike Kinser
Marty O'Mara
Brian Hopkins
Kay Hopkins
Mark Wimmer
Mike McGuire

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

Ground Water/Minerals
Paleontology
Riparian
Downhole Conditions of Approval
Transportation, Recreation
Visual Resources
Soil, Water and Air,
Range

FONSI
CO-140-2005-132 EA

EnCana Oil & Gas (USA) Inc
Proposal to Drill 1 Exploratory Well from Proposed BLM Well Pad
and Obtain Pipeline Right-of-Way in Pete and Bill Creek Area (COC-69292)
Federal 1-8 (PH1 pad)

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

DECISION RECORD

DECISION: It is my decision to approve the Application for Permit to Drill a single exploratory well [Federal 1-8] with the Conditions of Approval in order to provide for the orderly, economical and environmentally sound exploration and development of oil and gas resources on valid oil and gas leases.

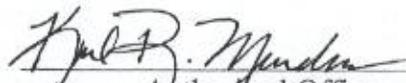
RATIONALE:

1. Approval of the proposed action is validating the rights granted with the federal oil and gas leases to develop the leasehold to provide commercial commodities of oil and gas.
2. The environmental impacts have been mitigated with measures included in the Surface Use Plan and the attached Conditions of Approval.

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

NAME OF PREPARER: Jim Byers, Natural Resource Specialist

SIGNATURE OF AUTHORIZED OFFICIAL:


Authorized Officer

DATE SIGNED: NOV 18 2005

CONDITIONS OF APPROVAL
APPLICATION FOR PERMIT TO DRILL

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

PAD	PH1	Location	SENE Sec 1, T08S, R96W	
Well Name	Well No.	API No.	Bottom Hole Location	Lease
Federal	1-8 (PH1)		SENE Sec 1 T08S, R96W	COC-067090

NOTIFICATION REQUIREMENTS

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

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

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

Please contact Carol Snyder (970)244-3033, or Ed Fancher (970)244-3039, of the BLM Grand Junction office at least twenty-four (24) hours prior to running the surface and production casing and conducting the BOP test. **Contact Marty O'Mara (970)947-2825, BLM Glenwood Springs, at least 24 hours prior to spudding the well.**

**DOWNHOLE CONDITIONS OF APPROVAL FOR NOTICE TO DRILL
PH1 pad well**

1. The production casing minimum TOC for each well is listed in the table below. This must be achieved during the primary cement job or through remedial cementing.

<u>Well No.</u>	<u>Minimum TOC</u>	
	<u>TVD</u>	<u>MD</u>
1-8 (PH1)	3037'	3037'

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. All prospectively valuable minerals encountered during drilling, will be recorded by depth and adequately protected. All oil and gas shows will be tested to determine commercial potential.
5. The neutron-density porosity log is proposed to be run from TD to surface casing, but is listed as optional. The neutron-density log **shall** be run from TD to surface casing **in at least one** well on the pad.

REGULATORY REMINDERS

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

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

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

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

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

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

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

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

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

Marty O'Mara Petroleum Engineer	C: 970.319.5837 Glenwood Springs Fax	W: 970.947.2825 970.947.2829
Carol Snyder Petroleum Engineering Tech.	H: 970.255.9339	W: 970.244.3033 C: 970.216.6146
Ed Fancher Petroleum Engineering Tech.	H: 970.242.9502	W: 970.244.3039 C: 970.640.4590
Jim Byers Natural Resource Specialist		W: 970.947.2804

BLM Fax: 970.244.3083

EPA'S LIST OF NONEXEMPT EXPLORATION AND PRODUCTION WASTES

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

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

SURFACE USE CONDITIONS OF APPROVAL

1. The paint color to be used on all surface facilities including the metal containment rings surrounding the tank batteries is Shale Green (5Y 4/2).
2. To minimize impacts to wintering big game, the winter timing limitation will be invoked on the pipeline right-of-way that crosses BLM which will allow no pipeline construction from December 1 to April 30.

Furthermore, for the PH1 access road and pad, the 60 day Condition of Approval for Big Game Habitat identified in Appendix D-1 in the GSRA Oil & Gas Final SEIS (approved March 24, 1999) will be invoked. This COA states: "To protect crucial big game winter range on leases without timing restrictions, construction and drilling activities are prohibited from January 15 through March 15."

The rationale for invoking this COA is based on field review and the updated Colorado Division of Wildlife Big Game Winter Habitat mapping which clearly identifies the well location and access road within these crucial winter ranges.

3. To avoid pinyon tree mortality created from the ongoing pinyon Ips beetle outbreak, any pinyon trees disturbed during road, pad or pipeline construction work will be chipped after severed from stump or grubbed from ground, or cut and removed from site within 24 hours to a Colorado State Forest Service-approved site.

Juniper trees within the construction limits would be removed and placed at the toe of fillslope in a windrow to help catch excavated material. Such woody material will be placed perpendicular to the slope (or placed cross-slope) to help retain soil, reduce soil erosion and reduce visual contrast of the cuts and fills. Clearing and grubbing debris shall not be placed or buried under any embankment sections except as described above. Any trees damaged outside the construction limits from rolling material or other construction activities would be removed or limbed, depending on the extent of damage.

4. A traffic and livestock control gate will be installed across the PH1 access road by operator at a location at or near the BLM/private property line. Provisions to minimize potential vehicle and livestock trespass should be factored into the final gate location.

5. Operator will consult the State of Colorado Water Quality Control Division (for stormwater permits) prior to commencing construction activities related with said permit within the proposed action area. Written documentation to the Authorized Officer is required to indicate that appropriate permits have been obtained or are not required by the permitting agencies.

6. Fencing to control grazing livestock within the BLM range allotment will be installed around the area of pad disturbance including the perimeter of excess material. This fencing will be of standard and type to keep livestock from penetrating the fenced perimeter. Fencing will be installed after dirtwork and seed application is completed for interim reclamation and prior to livestock turnout on the allotment. Fencing will remain in place and operational until the seeded species are firmly established and at least 50% of the seeded species are producing seed.

7. The edge of disturbance proposed for the well pad is to be fenced (preferably with silt fence along all fillslopes and edge of excess material pile and plastic mesh fence around cutslopes and topsoil pile). Personnel and all equipment are restricted to the authorized well pad, access road, and pipelines during all phases of construction, development, and maintenance.

8. The operator is responsible for applying dust abatement measures as needed or directed by the Authorized Officer. The level and type of treatment (watering or application of various dust agents, surfactants and road surfacing material) may be changed in intensity and must be approved by the Authorized Officer. Dust control is needed to prevent heavy plumes of dust from road use that create safety problems and disperses heavy amounts of particulate matter on adjacent vegetation.

9. The operator shall be responsible for monitoring for the presence of any County or State-listed noxious weeds at least once annually during the growing season for the life of the well. Noxious weeds, which may be introduced due to soil disturbance associated with the proposed lease operations, will be treated by methods to be approved by the Authorized Officer. A Pesticide Use Proposal (PUP) must be approved by BLM prior to use of any herbicides.

10. Remote monitoring will be conducted during the winter months to minimize site visits to pad locations and reduce traffic impacts to wintering big game wildlife. In addition, scheduled winter visits (those other than for emergency purposes), should be scheduled between 10 a.m. and 3 p.m. to further minimize disturbance to wintering big game wildlife.

11. Cultural Resource Education/Discovery Stipulation

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

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

If in connection with operations under this contract the project proponent, his contractors, subcontractors, or the employees of any of them, discovers, encounters or becomes aware of any objects or sites of cultural or paleontological value or scientific interest such as historic or prehistoric ruins, graves or grave markers, fossils, or artifacts, the proponent shall immediately suspend all operations in the vicinity of the cultural or paleontological resource and shall notify the BLM authorized officer of the findings (16 U.S.C. 470h-3, 36CFR800.112). Operations may resume at the discovery site upon receipt of written instructions and authorization by the authorized officer. Approval to proceed will be based upon evaluation of the resource. Evaluation shall be by a qualified professional selected by the authorized officer from a federal agency insofar as practicable. When not practicable, the holder shall bear the cost of the services of a non-federal professional.

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

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

The proponent may relocate activities to avoid the expense of mitigation and/or the delays associated with this process, as long as the new area has been appropriately cleared of resources and the exposed materials are recorded and stabilized. Otherwise, the proponent will be responsible for mitigation costs.

The authorized officer will provide technical and procedural guidelines for the conduct of mitigation. Upon verification from the authorized officer that the required mitigation has been completed, the proponent will then be allowed to resume construction.

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

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

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

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

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

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

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

Seed Mix Application Practices

A specified seed mix designed to meet interim reclamation standards while providing forage and browse for wintering elk and deer using a mixture of shrub, grass and forb species shall be applied. The following seed mix and rates will be used on all disturbed surfaces, including pipelines unless otherwise noted in the specific APD:

<u>Species of Seed</u>	<u>Variety</u>	<u>Application Rate (lbs/acre)</u>
Winterfat		0.5
Wyoming big sagebrush		0.5

4-wing Saltbush	Rincon	2.0
Shadscale		2.0
Western wheatgrass	Arriba	3.0
Bluebunch wheatgrass	P7	3.0
Indian ricegrass	Paloma	2.0
<u>Galleta</u>	Viva	<u>1.0</u>
Total:		14.0 lbs. PLS/acre Total

The above rate of application is listed in pounds of pure live seed (PLS)/acre. The seed will be certified and there will be no primary or secondary noxious weeds in the seed mixture. The operator shall notify the Authorized Officer 24 hours prior to seeding and shall provide seed tags and evidence of certification of the seed mix to the Authorized Officer within 30 days of completion of the seed application.

Upon completion of backfilling, leveling, ripping to minimum 18 inch depth on 2 foot centers, and recontouring, the stockpiled topsoil will be evenly spread over the reclaimed areas(s). Prior to reseeding, all disturbed surfaces will be scarified and left with a rough surface. No depressions will be left that would trap water and form ponds.

The prepared seedbed will be seeded within 24 hours after completing dirt work unless a change is requested by the operator and approved by the Authorized Officer. Prepare the seedbed by contour cultivating 4-6 inches deep. **Drill seed ¼ to ½ inch deep** following the contour. In areas that cannot be drilled, broadcast seed at 1½ times the application rate and cover ¼ to ½ deep with a harrow or drag bar. Fall seeding will be conducted after September 1 and prior to ground frost. Spring seeding will be done after the frost leaves the ground and no later than May 15th. If the seeding is unsuccessful, operator will be required to make subsequent seedings until the reclamation objectives identified in Appendix I. Surface Reclamation of the 6/98 GSFO's Draft Supplemental EIS for Oil & Gas Leasing Development are met.

Erosion Control Practices

The cut and fill slopes will be protected against rilling and erosion with measures such as water bars, lateral furrows, or other measures approved by the Authorized Officer. Weed free straw bales, straw "wattles", straw matting or a well-anchored fabric silt fence will be used on cuts and fill slopes to protect against soil erosion.

Topsoil Practices

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

Site Protection Practices

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

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

EXHIBIT B, COC69292 and COC69292A Stipulations

For Natural Gas and Produced Water(A) Pipelines

1. The 6” natural gas and 4” produced water pipelines as shown on the Map, Exhibit A, shall be installed to industry standards. The COC69292 and COC69292A pipeline rights-of-way shall be within the same 30’ wide right of way corridor, and utilize the same adjacent temporary 25’ construction width. The pipelines shall be buried in the same trench with at least 4’ of cover.
2. The holder shall request a preconstruction conference with the authorized officer at least seven days prior to the commencement of construction under this grant. The contact person is Carlos Sauvage at the Glenwood Springs Field Office, phone (970) 947-2832. One purpose of this conference is to determine if any special conditions will be required to limit environmental damage or insure surface stability and drainage.
3. Cultural Resources, Education/Discovery Stipulation:

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

Pursuant to 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 will be based upon evaluation of the resource. Evaluation shall be by a qualified professional selected by the authorized officer from a federal agency insofar as practicable. When not practicable, the holder shall bear the cost of the services of a non-federal professional.

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

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

Preservation Officer that the findings of the authorized officer are correct and the mitigation is appropriate.

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

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

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

4. The operator shall obtain an agreement with any existing rights-of-way holders prior to any disturbance or construction of pipelines across or adjacent to any existing right-of-way.
5. When saturated soil conditions exist on or along the pipeline route, construction shall be halted until soil material dries out or is frozen sufficiently for construction to proceed without undue damage and erosion to soils.
6. All surface disturbance shall be limited to the minimum necessary to complete pipeline construction. All construction activities and surface disturbance shall take place within the COC69292, A, right-of-way corridor. The exterior limits of the right-of-way area shall be flagged on the ground as necessary to prevent outside disturbance.
7. The holder shall insure that all construction and maintenance equipment is washed prior to use to insure removal of weed seeds and their potential transfer to the ROW area. The holder will adhere to the specified seed mix and will continue with reclamation activities, including reseeding if necessary, until BLM's interim reclamation objectives are achieved.

The holder shall monitor the ROW for the presence of noxious weeds annually during the growing season (or as frequently as the Authorized Officer determines) for the life of the permit. After consulting with the authorized officer, the holder shall promptly treat and control any Garfield County or State-listed noxious weeds which have resulted from the holder's construction, operation, maintenance or use of the ROW. If chemical control is necessary, use of pesticides shall comply with the applicable Federal and State laws.

Pesticides shall be used only in accordance with their registered uses and within limitations imposed by the Secretary of the Interior. Prior to the use of pesticides, the holder shall obtain from the authorized officer written approval of a plan (Pesticide Use Proposal) showing the type and quantity of material to be used, the weed (s) to be controlled, method of application, location of storage and disposal of containers, and any other information deemed necessary by the authorized officer. Emergency use of herbicides shall be approved in writing by the authorized officer prior to such use.

8. Pipeline warning signs shall be installed within five days of construction completion and prior to use of the pipeline for transportation of product. Pipeline warning signs are required at all road crossings. Signs shall be visible from sign to sign along the R/W. For safety purposes each sign shall be permanently marked with the operator's name and shall clearly identify the owner (emergency contact) and purpose (product) of the pipeline.
9. Special fire control stipulations may be in affect depending on when construction takes place. The grant holder shall coordinate with the BLM Authorized Officer and comply with any applicable fire control measures.
10. All trash shall be confined in a covered container and hauled to an approved landfill. Burning of waste or oil is not approved.
11. No pipeline construction activity is permitted December 1-April 30 to protect big game winter range use.
12. The holder shall comply with all applicable Federal laws and regulations existing or hereafter enacted or promulgated. In any event, the holder shall comply with the Toxic Substances Control Act of 1976, as amended (15 U.S.C. 2601 *et seq.*) with regard to any toxic substances that are used, generated by or stored on the ROW or on facilities authorized under this ROW grant (see 40 CFR, Part 702-799 and especially, provisions on polychlorinated biphenyls, 40 CFR 761.1-761.193). Additionally, any release of toxic substances (leaks, spills, etc.) in excess of the reportable quantity established by 40 CFR, Part 117 shall be reported as required by the Comprehensive Environmental Response, Compensation and Liability Act of 1980, Section 102b. A copy of any report required or requested by any Federal agency or State government as a result of a reportable release or spill of any toxic substances shall be furnished to the authorized officer concurrent with the filing of the reports to the involved Federal agency or State government. The holder shall comply with applicable State standards for public health and safety, environmental protection and siting, construction, operation and maintenance, if these State standards are more stringent than Federal standards for similar projects. Part 117 shall be reported as required by the Comprehensive Environmental Response, Compensation, and Liability Act of 1980, Section 102b. A copy of any report required or requested by any Federal agency or State government as a result of a reportable release of spill of any toxic substances shall be furnished to the authorized officer concurrent with the filing of the reports to the involved Federal agency or State government.

13. All areas of surface disturbance shall be recontoured to blend with the adjacent natural terrain and shall be seeded according to the BLM specifications for the related on-lease section of pipelines leading from the PH-1 pad.
14. To avoid pinyon tree mortality created from the ongoing pinyon Ips beetle outbreak, any pinyon trees disturbed during pipeline construction work will be chipped after severed from stump or grubbed from ground, or cut and removed from site within 24 hours to a Colorado State Forest Service-approved site.
15. EnCana Oil & Gas (USA) Inc. will consult the State of Colorado Water Quality Control Division (for stormwater permits) prior to commencing construction activities related with said permit within the proposed action area. Written documentation to the Authorized Officer is required to indicate that appropriate permits have been obtained or are not required by the permitting agencies.
16. Any range improvements inadvertently damaged during construction of the proposed project will be repaired or replaced by the operator.
17. The paint color to be used on all surface facilities including pipeline risers is Shale Green (5Y 4/2).
18. Existing 2 track route which parallels the proposed buried pipeline alignment would be reclaimed and put to bed.
19. Segment of surface pipelines to be installed will be accomplished with minimum amount of surface disturbance possible (not to exceed 20 feet in width at any point). Surface pipeline segment will be restaked by operator and inspected by BLM personnel prior to beginning construction since pipeline corridor was not realigned when PH1 pad was moved and restaked.