

**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-140-2005-095 EA

CASEFILE NUMBER: Lease # COC-58670

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

LEGAL DESCRIPTION:

Federal SP 22-8 Surface location: T8S, R95W, Sec 8, NW¼NW¼, 6th P.M.
 Bottom Hole: T8S, R95W, Sec 8, SE¼NW¼, 6th P.M. (1468' FNL, 1600' FWL)
 Surface Owner: BLM
 Federal Lease: COC-58670

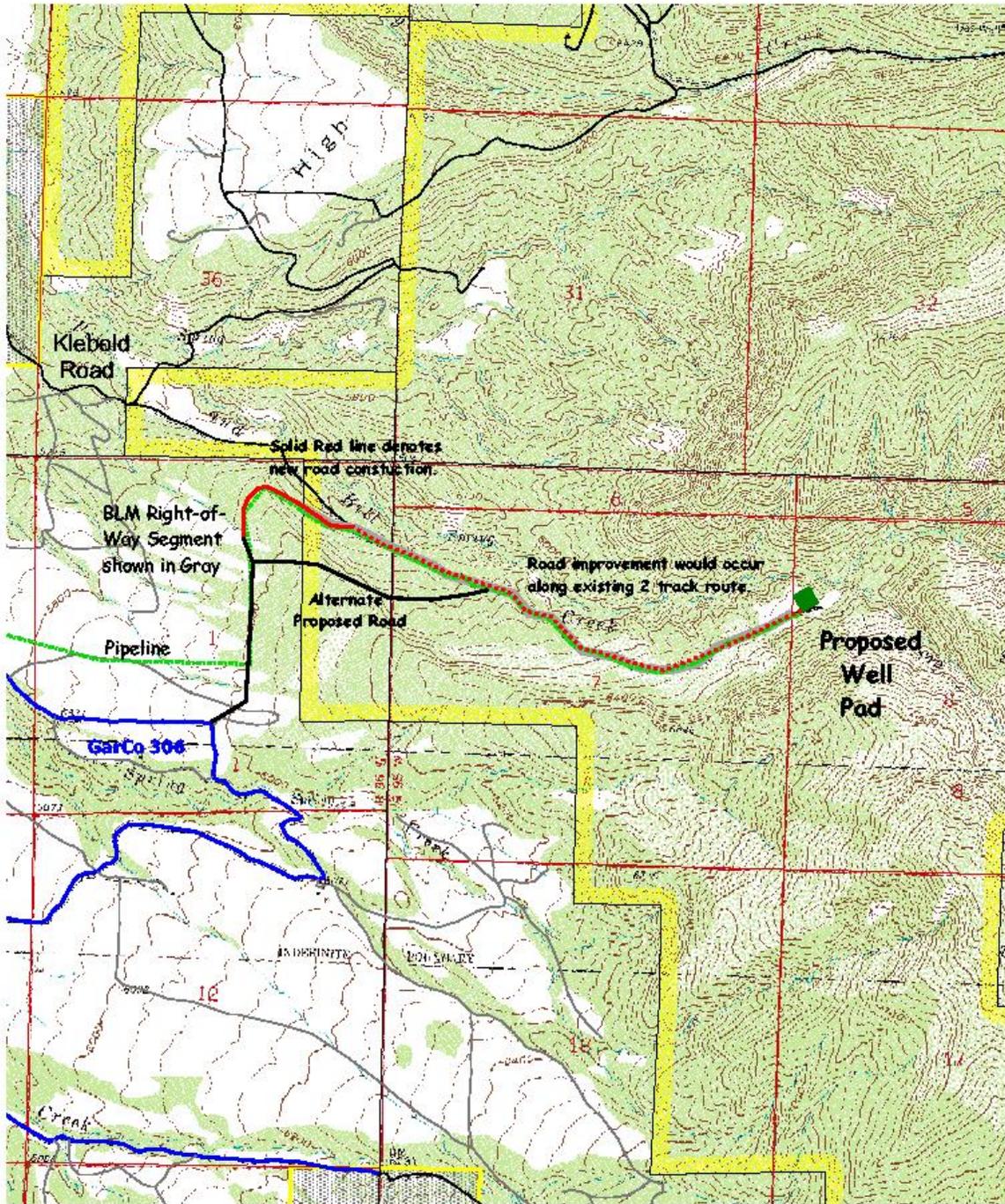
APPLICANT: Noble Energy under farm-out agreement with Williams Production RMT Company who is lease holder

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 2.2 acres, would be situated in mixed pinon-juniper/sagebrush/mountain brush vegetation approximately 750 feet south of Pete and Bill Creek. An existing 2-track route accesses the area from Klebold/County Road 304. Public motorized access is not available to the area of public lands.

The operator for drilling and completion work would be Noble Energy under farm-out agreement with Williams Production (leaseholder). Noble has existing well pads, roads and gathering lines established on private lands in T8S R96W Sec 1, and consequently has obtained surface agreements with fee landowners to access the federal lease in Section 8 (T8S, R95W). To access the federal lease (COC-58670), Noble is applying for BLM road and pipeline right-of-way across Sections 1 (T8S, R96W) and 7 (T8S, R95W).

The total length of new road construction/road improvement and pipeline installation would involve 1,265 feet on Garber property (Section 1) and 8,809 feet on BLM land crossing Sections 1, 7 and 8 totaling 10,074 feet. Using a maximum 60 foot construction width for the road and adjacent steel 10" gas pipeline and 4½" fiberglass water line, the total expected surface disturbance from the proposed BLM pad to Cass/Garber fee pad would be 13.9 acres. Of this total, 12.1 acres of disturbance would be attributed to road and gathering impacts on BLM. When coupled with the expected 2.2 acres of pad disturbance, the total impacted area on BLM would be 14.3 acres. For BLM right-of way purposes,



Noble Energy Proposed Well on Williams Lease

T8S, R95W, Sec 8 NW¹/₄NW¹/₄ 6th PM

Garfield County, CO

Surface Owner: BLM



Scale 1 : 24,000

8/2/05

the right-of-way length would be 8, 605 feet, the width would not exceed 60 feet and the calculated right-of-way acreage would total 11.85 acres.

The new access road to the SP22-8 pad would be constructed with maximum grade of 10%, 18 foot travel width with turnouts and culverts or water dips installed for adequate road drainage. A cattleguard with bypass gate would be installed across access road at private land/BLM boundary fence in Section 1. The APD lists 7 recommended culvert locations with sizes ranging from 24" diameter by 20 foot length at Station 44+05 to a maximum 36 " diameter by 54 foot pipe at Station 46+25. Sideslopes along the entire proposed road average less than 30%. If the well is a producer, the road would be graveled with minimum 4" of pit run with cap of gravel as needed.

To avoid exacerbating mortality problems with pinon ips beetles, any pinon trees disturbed during road construction work would be chipped immediately after severed from stump or grubbed from ground, buried in toe of fillslopes (if feasible) or cut and removed from site within 24 hours to approved site.

The existing 2-track route up Pete and Bill Creek would remain unimproved from its juncture with Klebold Road in Section 36, T7S R96W south for approximately 4000 feet until it ties in with the proposed access road.

The exploratory well qualifies as a GAP waiver as defined in Appendix B of the 1999 SEIS.

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.

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.

Alternatives Considered but Deleted from Further Consideration: An alternate access road was examined during June 30, 2005 onsite visit with Noble Energy. This new construction segment (totaling 800 feet across private and 2950 feet on BLM) would traverse sideslopes in excess of 65% with large rock outcrop material providing obstacle. This route was deemed undesirable from standpoint of impact to surface resources, potential scar on landscape, and low potential for reclamation success. Furthermore, the route is not conducive for installing buried pipeline adjacent because of the excessive sideslopes.

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. For further details, refer to the Draft Roan Plateau RMPA EIS, page 3_20-22.

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: Three cultural resource inventories (GSFO# 1105-3, 1105-10 and 1105-17) have been conducted for the well location and access roads/pipelines. One historic property (5GF3598) was identified that is eligible for listing on the National Register of Historic Places. The proposed access road/pipeline has been designed to avoid this site. Therefore, formal consultation was not initiated with the Colorado State Historic Preservation Officer for this well location and access road/pipeline and a determination of “**No Historic Properties Affected**” was made based upon results of the inventories, the avoidance of site 5GF3598, the BLM/SHPO National and Colorado Protocols (1997 and 1998) and National Historic Preservation Act (16 U.S.C. 470f).

Environmental Consequences: As currently planned the road and well location should have no direct impact on cultural resources. 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 Nobel and their subcontractors informing them of their responsibilities to protect and report any cultural resources encountered on public land during operations under this permit.

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

ENVIRONMENTAL JUSTICE

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

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

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

FARMLANDS, PRIME AND UNIQUE

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

FLOODPLAINS, 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 pad lies in a mixed pinyon-juniper/sagebrush/mountain brush community with herbaceous cover comprised mainly of native grasses and forbs. Musk thistle and houndstongue was found growing within the perimeters of the proposed pad site during onsite field review.

Environmental Consequences/Mitigation:

The risk of cheatgrass becoming dominant on the site following disturbance is high, since cheatgrass is already present in the vicinity. Along the proposed access road, a small pinon-juniper area which burned in a wildfire 5 years ago is now dominated by cheatgrass. The APDs and Conditions of Approval include measures to re-vegetate the well site with native perennial grasses and shrubs and native or desirable, nonnative forbs. The project proponent will adhere to the specified seed mix and will continue with reclamation activities, including reseeding if necessary, until BLM’s interim

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

reclamation objectives are achieved. In addition, a standard Condition of Approval is attached requiring the project proponent to promptly treat and control any invading noxious weeds. A Pesticide Use Proposal must be approved by BLM prior to commencing any herbicide spraying.

MIGRATORY BIRDS

Affected Environment: The proposed road and well pad are located entirely within mixed pinon-juniper/sagebrush/mountain brush habitat. Portions of the road are within an old burn while the well pad is in mature mixed shrub habitat. The understory is very productive with several grasses and an abundance of forbs. Given this mix of vegetation, the project areas provide both foraging and nesting habitat for a variety of migratory birds. One species listed on the U.S. Fish and Wildlife Service's Birds of Conservation Concern list may be present. Within the mixed mountain shrublands and oakbrush, Virginia's warbler may occur. This species is a ground nester that requires dense shrub cover such as that found in the project area.

A raptor survey was completed for the road access and well pad by WestWater Engineering on May 3, 4, and 9, 2005. One currently inactive, but apparently recently (within the last 2 years) active raptor nest was found in T7S, R95W, Section 36 SE/SW. A second inactive but potentially recently active nest was found in T8S, R95W, Section 7 NE/NE. Both nest sites appear to be just within the ¼ mile buffer zone related to timing limitations. Golden eagle nests are located within 2 miles of the proposed activity. It is likely that these and other raptors forage on and near the proposed access road and well pad.

Environmental Consequences/Mitigation: The proposed action will result in the loss of approximately 14.3 acres of potential nesting and foraging habitat for migratory birds including Virginia's warbler. If vegetation clearing is conducted during the spring nesting season, it is possible that Virginia's warbler nests and/or eggs could be destroyed. Impacts would likely be confined to individual birds and should not result in quantifiable impacts at the population or species level. Although portions of the disturbed areas will be reclaimed, habitat will cease to function in its current capacity as larger shrubs and trees are replaced by grasses and forbs. The action will further fragment habitats important to migratory birds and reduce habitat connectivity and patch size. It is also likely that during road and pad construction, and drilling and completion activities, individual birds will be displaced to adjacent habitats due to noise and human presence. This will be a long-term (>20 years) impact as increased vehicular traffic will result associated with continued field development.

Both identified raptor nests appear to be located just within the ¼ mile timing buffer zone. If ground disturbance is conducted outside of the nesting season then no impacts should occur. If road construction and upgrades and well pad construction is planned during the next breeding season, then a quick spot check of both nests should be made prior to work to determine activity status.

NATIVE AMERICAN RELIGIOUS CONCERNS

Affected Environment: One historic site was identified during one of the surveys but it is being avoided and should not be directly impacted by the proposed action. Besides this site no Native American concerns are known by the GSFO within the project area and none were identified during the inventory. The Ute Tribes claim the area as part of their ancestral homeland. If new data is disclosed by the Ute Tribes, new terms and conditions may have to be negotiated to accommodate their concerns.

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

A standard Education/Discovery Condition of Approval for Cultural Resource protection will be attached to the APD.

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

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

Specific to the project location, the well pad is located within mapped habitat for Canada lynx a federally threatened species. The habitat is considered “other” habitat as it is located within 500 meters of mapped winter foraging habitat (fir, spruce). However, because the vegetation is mixed mountain shrub, it is considered non-habitat despite its proximity to winter habitat. Only sagebrush, pure aspen, and riparian within 500 meters of winter foraging habitat is considered “other” habitat. The project area does not contain any other habitat or occurrence records for any other federal or state listed species, federal proposed or candidate species. 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:

Canada lynx

Although mapped as “other” habitat for this species, the well pad is located in mixed mountain shrubland habitat. This vegetation type is considered non-habitat for lynx. Only sagebrush or pure aspen located within 500 meters of winter foraging habitat is considered “other” habitat. The project area contains no primary lynx habitat will not impair lynx movement through the area, and will have “**No Effect**” to Canada lynx or its habitat.

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 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. 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.

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.

Ground Water: Numerous water wells are found nearby at the ranches along Garfield Creek. The water wells are generally less than 300 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 >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.

- Noble 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 buried pipeline creating a total surface disturbance not to exceed 14.3 acres. The general soil map from the Soil Survey of Rifle Area, Colorado indicates that the proposed pads are located on three soil map units, described below:

- Ildefonso stony loam (25-45% slopes) is a deep well drained hilly to steep soil found on mesa breaks, valley sides, alluvial fans, with small areas located on steep mesa escarpments. Erosion hazard is described as severe and surface runoff is medium. Typical uses for this map unit are wildlife and limited grazing.
- Potts loam (6 to 12% slopes) 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.
- Potts-Ildefonso complex (12 to 25% slopes) 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.

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.

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 would be constructed within mixed pinon-juniper/sagebrush/mountain brush habitat. Native grasses and forbs are present in the understory. Reclamation potential on this site is satisfactory as evidenced from reclamation efforts on nearby surface disturbing projects. However, cheatgrass does occur in the vicinity and has become dominant on a pinon-juniper area that burned in a wildfire approximately 5 years ago. Live pinon trees would be impacted during the road construction so the Ips beetle problem could be exacerbated by this action.

Environmental Consequences: The planned disturbed area would be estimated at 14.3 acres, representing a short-term loss of vegetation in the temporary disturbed areas and a long-term loss of

vegetation on the portions of the pad and road needed for ongoing production activities. Mature pinon-juniper vegetation would require more than 50 years to re-establish. With implementation of reclamation practices identified in the COAs, establishment of desirable herbaceous vegetation on the sites can be expected within 2-3 years. Monitoring of the reclamation would occur as identified in COAs.

Mitigation: Operator will individually cut and chip pinon trees that would be impacted by the project proposal. The pad will be fenced to exclude livestock grazing for the first two growing seasons or until the seeded species become firmly established, whichever is longer. 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): A formal land health assessment was completed in the area in 2001. The area was generally meeting Standard 3 for plant communities at that time, however, several problems were evident. Problems noted were abundance of cheatgrass in the area, some 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. With implementation of the mitigation proposed above, the proposed action should not attract pinon Ips beetles to the area and increase the natural mortality of pinons. 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 result in no further deterioration of the ability of the landscape to maintain or meet Standard 3 for healthy plant communities. The proposed action may result in an improvement in land health conditions on a site-specific basis.

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. Pete and Bill Creek in the vicinity of the proposed action contains no aquatic wildlife as it is dry much of the year. The Colorado River contains a diverse assemblage of fishes and aquatic insects.

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, pipeline, and well pad traverse mainly mixed mountain shrubland habitat consisting of oakbrush, sagebrush, serviceberry, and snowberry. Some pinyon-juniper woodlands are also present in the area. Given the diverse vegetation, the area provides habitat for a variety of big game, small game, and nongame mammals, reptiles, and birds. The area is also prime foraging habitat for black bears.

The road, pipeline, and well pad are all located in mapped big game winter range that has been identified as High Value habitat. There is no stated timing limitation for big game winter range on the oil and gas lease. However, because the operator must apply for road and pipeline right-of-way across BLM lands in Section 1, the standard 5 month (12/1-4/30) restriction will be stipulated in the right-of-way per BLM's Oil & Gas FSEIS approved in 1999. This stipulation on the access road will effectively restrict road, pipeline, and pad construction, and drilling and completion work on the pad during the winter period identified above. 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/Mitigation: The proposed action will result in the loss of approximately 14.3 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 production activities will displace some wildlife species away from 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: To minimize impacts to wintering big game the winter timing limitation will be invoked on the road and pipeline right-of-way that crosses BLM which will allow no road use for the purposes of road, pipeline, or pad construction, or well drilling or completion activities 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, a portion of this action (road and pipeline segment) is located within the South Parachute Geographical Area Plan (GAP) in preparation. This portion of the action will be included in cumulative impact analysis in the GAP EA to determine if mitigation thresholds have been met. 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/Mitigation: Motorized public access is not available in the project area, although an existing 2 track route traverses through the project area allowing limited motorized use by adjacent landowners. The proposed new road access would change the type, frequency and amount of motorized use in Pete and Bill Creek 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 summer 2005.

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 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: Since 1 well would be developed from a proposed well pad, construction activities would result in minimal loss, < 1 AUM, of forage available to livestock. Rehabilitation of vegetation on the location would result in reestablishment of forage which usually takes about 3 years. 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.

VISUAL RESOURCES

Affected Environment: The proposed well pad would be located within an area classified as VRM Class III while the access road and pipeline would fall in VRM Class III and IV as outlined in the 1984 Glenwood Springs Resource Management Plan. The objective of the VRM Class IV 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.

The objective of VRM Class III is to partially retain the existing character of the landscape. The level of change to the characteristic landscape should be moderate. Management activities may attract attention but should not dominate the view of the casual observer. Changes should repeat the basic elements found in the predominant natural features of the characteristic landscape.

The protection of VRM classes, landscape character and scenic quality on private lands and split estate is discussed on pages 3-41 through 3-45 of the FSEIS. The impacts of development are also discussed on pages 4-49 through 4-54 of the FSEIS. The proposed action will not affect any of the key viewing areas

or viewsheds described in the FSEIS. In particular, the proposed action will not be seen from the key viewing areas of the 1-70 corridor or the town of Rifle.

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

The proposed access road and pipeline would create cuts and fills that could lengthen the long term visual modifications because of the loss of vegetation along the road corridor. The proposed roadway traverses through dense pinon-juniper woodlands and mountain brush vegetation typified by 15-25 foot high trees, serviceberry and oakbrush creating contrast in color, line, shape and texture. The cuts and fills also create contrast by introducing new colors, shapes and forms into the existing landscape. After completion of new road construction and pipeline, long term impacts are expected due to the removal of the dense vegetation. The long term level of change in the landscape will be moderate and evident but should conform to VRM III and IV Objectives.

The production facilities planned for placement on the pad in support of the proposed wells will be painted conforming environmental colors as specified in the COAs or lease terms. Efforts should be made to leave as much existing vegetation as possible to screen the excavated disturbance. The facilities should be placed against the cut side of the pad, where feasible.

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

Non-Critical Element	NA or Not Present	Applicable or Present, No Impact	Applicable & Present and Brought Forward for Analysis
Travel/Access			X
Cadastral Survey	X		
Fire/Fuels Management		X	
Forest Management		X	
Geology and Minerals			X
Hydrology/Water Rights		X	
Law Enforcement	X		
Paleontology			X
Noise			X
Range Management			X
Realty Authorizations		X	
Recreation	X		
Socio-Economics		X	
Transportation		X	
Visual Resources			X

CUMULATIVE IMPACTS SUMMARY:

The 2004 Draft Roan Plateau Resource Management Plan Amendment & Environmental Impact Statement released in November, 2004 (DEIS, 2004) analyzed 5 alternatives for oil and gas development

in the Roan Plateau planning area. These alternatives assessed impacts, including cumulative impacts, for oil and gas development scenarios ranging from 855 to 1582 new gas wells on public lands. The drilling of the wells addressed in this Environmental Assessment is well below the low range of development analyzed in the DEIS.

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

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

PERSONS / AGENCIES CONSULTED:

Brian Wood - Permit Agent, PermitsWest
 Mark Stringfield and Glen Adams- Noble Energy
 Lars Inman – Williams Production

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	Geologist	Ground Water/Minerals
Jim Wilkinson	Geologist	Paleontology
Mike Kinser	Rangeland Management Specialist	Riparian
Marty O'Mara	Petroleum Engineer	Downhole Conditions of Approval
Brian Hopkins	Community Planner	Transportation, Recreation
Kay Hopkins	Outdoor Recreation Planner	Visual Resources
Mark Wimmer	Rangeland Management Specialist	Soil, Water and Air,
Mike McGuire	Rangeland Management Specialist	Range

**FONSI
CO-140-2005-095 EA**

**Noble Energy Inc
Proposal to Drill 1 Exploratory Well from proposed BLM Well Pad
in Pete and Bill Creek Area**

Federal South Parachute 22-8

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 SP22-8] 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:

AUG 24 2005

CONDITIONS OF APPROVAL
APPLICATION FOR PERMIT TO DRILL

Company/Operator: **Noble Energy, Inc**

Well Name	Well No.	API No.	Bottom Hole Location	Lease
Fed South Parachute	22-8		SWNW Sec 8 T08S, 95W	COC-58670

NOTIFICATION REQUIREMENTS

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

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

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

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

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

DOWNHOLE CONDITIONS OF APPROVAL FOR NOTICE TO DRILL

1. The TOC for the production casing needs to be at the base of the surface casing either during the primary cement job or through remedial cementing. The TOC for the well must be a minimum depth of:

	Minimum TOC	
<u>Well No.</u>	<u>MD</u>	<u>TVD</u>
22-8	1500'	1500'

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. Contact BLM upon encountering any usable water zones.
4. All casing strings below the conductor shall be pressure tested to 0.22 psi/ft or 1500 psi, whichever is greater, but not to exceed 70 percent of the minimum internal yield. If the pressure declines more than 10 percent in 30 minutes, corrective action must be taken.
5. Prior to drilling, provide all geologic tops on the directional diagram to the BLM Glenwood Springs field office, including the Williams Fork top of gas pay. Include the Mesa Verde formation top.

REGULATORY REMINDERS

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

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

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

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

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

Section 102(b)(3) of the Federal Oil and Gas Royalty Management Act of 1982, as implemented by the applicable provisions of the operating regulations at Title 43 CFR 3162.4-1(c), requires that "not later than the 5th business day after any well begins production on which royalty is due anywhere on a lease site or allocated to a lease site, or resumes production in the case of a well which has been off production for more than 90 days, the operator shall notify the authorized officer by letter or sundry notice, Form 3160-5, or orally to be followed by a letter or sundry notice, of the date on which such production has begun or resumed."

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

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

Marty O'Mara Petroleum Engineer	C: 970.319.5837 BLM Fax: 970.947.2829	W: 970.947.2825
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Carol Snyder Petroleum Engineering Tech.	H: 970.255.9339 C: 970.216.6146	W: 970.244.3033
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Ed Fancher Petroleum Engineering Tech.	H: 970.201.6792 C: 970.201.6792	W: 970.244.3039
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Bill Barter Natural Resource Specialist	W: 970.947.2838	
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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

Notification

1. At least forty-eight (48) hours prior to construction of access road and/or well pad, operator will notify BLM representative of construction startup plans.
2. 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.

Road Construction

3. The operator will be required to adhere to the staked centerline road alignment marked on-the-ground and construct the access road with an estimated maximum grade of 10%. Sidecasting of material will not be allowed on sideslopes exceeding 40%. Culvert will be installed at locations shown on submitted Pipeline and Access Road Plats dated 7/21/05. The inlet and outlet sides of the culvert will be riprapped with a well-graded mixture of rock sizes to prevent erosion or headcutting.

The road will be crowned, ditched, and drained with culverts and/or water dips. When rutting within the traveled way becomes greater than 6 inches, gravel will be applied as approved by the Authorized Officer.

4. With the season of use for livestock grazing occurring during the months of May, first half of June and October, any drilling or completion operations scheduled during these months will require the prior installation of a steel (H-20) cattleguard, concrete bases, and adjacent bypass gate in proposed access road at the existing barb wire fence in proximity to the property line between BLM and Gary Garber. Cattleguard, base and bypass gate will be constructed to specifications of BLM drawing #02457-1, 2 or 3.
5. Provisions to control rolling boulders and rock during construction will be implemented. Large excavated rocks will bedded into the subgrade and fill so as to prevent movement downslope during road pioneering and after construction completion.
6. Any existing range fence damaged from construction work or rolling material would be replaced and or repaired to the satisfaction of the Authorized Officer.

Clearing and Grubbing Work

7. To avoid pinon tree mortality created from the ongoing pinon ips beetle outbreak, any pinon trees disturbed during road, pad or pipeline construction work will be chipped after severed from stump or grubbed from ground, buried in toe of fillslopes (if feasible) or cut and removed from site within 24 hours to a Colorado State Forest Service-approved site.
8. 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.

Road Maintenance and Dust Control

9. Operator will be responsible for providing timely year-round road maintenance and cleanup on the access road. A regular schedule for maintenance will include, but not be limited to, blading, ditch and culvert cleaning, road surface replacement and dust abatement.

10. 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.

11. All State and Garfield County noxious weeds, which may be introduced due to soil disturbance associated with the proposed lease operations, will be treated promptly by methods to be approved by the Authorized Officer. A Pesticide Use Plan (PUP) is required prior to use of any pesticide.

Surface Facility Operations

12. The paint color to be used on all surface facilities including the metal containment rings surrounding the tank batteries and pipeline risers is Shale Green (5Y 4/2).

13. 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.

Cultural Resource Education/Discovery

14. 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.

Paleontological Resource Education/Discovery

15. 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.

Reclamation Plan

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

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

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

Seed Mix Application Practices

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

noted in the specific APD:

<u>Species of Seed</u>	<u>Variety</u>	<u>Application Rate (lbs/acre)</u>
Mountain Brome		2.0
Thickspike wheatgrass	Critana	3.0
Western wheatgrass	Arriba	3.0
Bluebunch wheatgrass	P7	3.0
Northern sweetvetch		1.0
Rocky Mountain penstemon		1.0
Total:		13.0 lbs. PLS/acre Total

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

Upon completion of backfilling, leveling, ripping to 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.