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-140-2006-063 EA

CASEFILE NUMBER: Lease # COC-23443

PROJECT NAME: Proposal to Drill 1 Vertical Well (PB Creek 7-22 renamed to Federal 7-11D well on 7D pad) from Proposed BLM Pad along existing Pete and Bill Creek Access Road (Benefiting program, Fluid Minerals 1310)

LEGAL DESCRIPTION:

PB Creek Federal 7-22	Surface location: T8S, R95W, Sec 7, Lot 5 (969' FNL, 1051' FWL)
(renamed Fed 7-11D)	Bottom Hole: Same
7D pad	Surface Owner: BLM
	Federal Lease: COC-23443

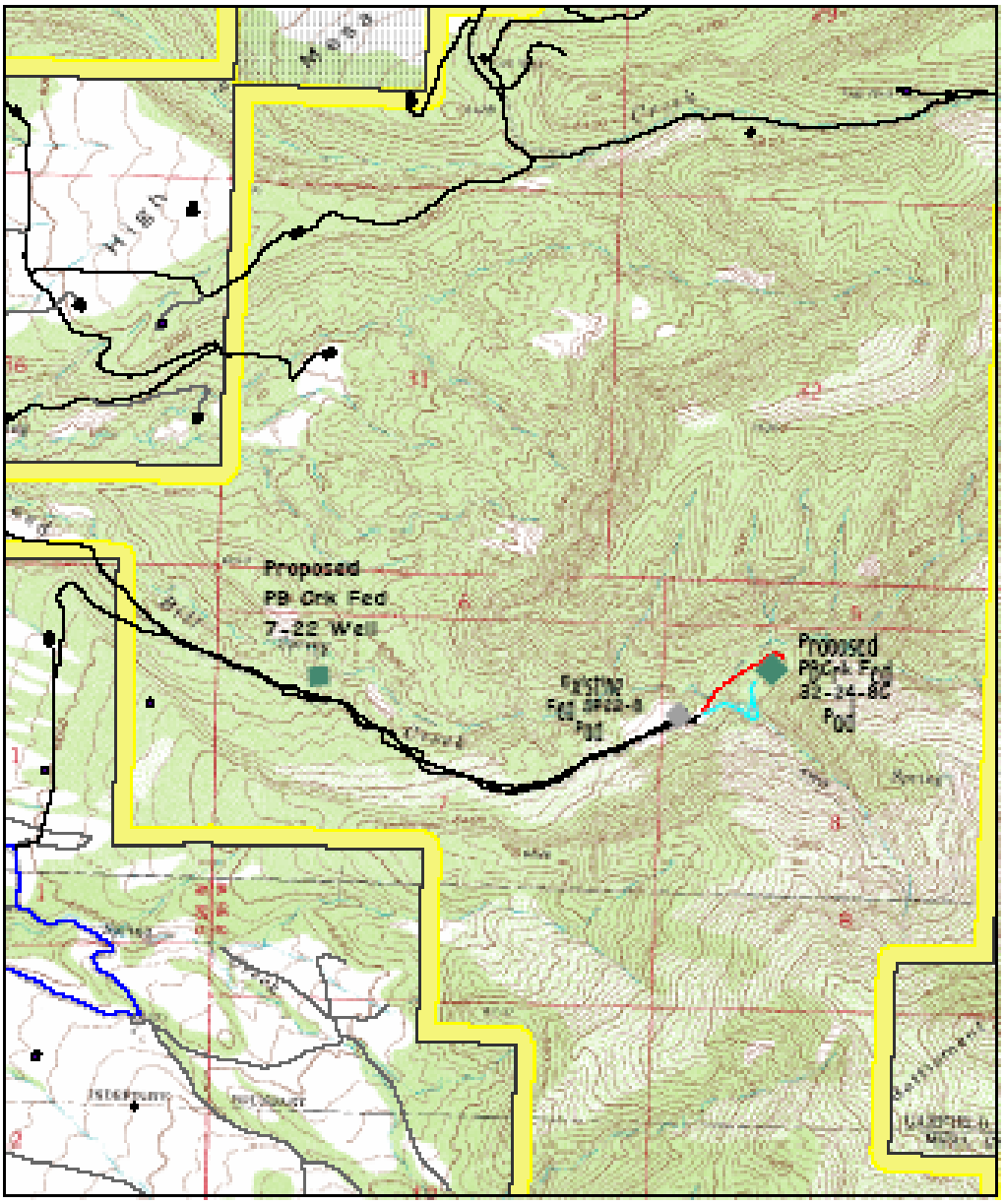
APPLICANT: Noble Energy Inc.

DESCRIPTION OF PROPOSED ACTION AND ALTERNATIVES

Proposed Action: The proposed action is to directionally drill and develop 1 federal natural gas well (PB Creek Federal 7-22 renamed to Federal 7-11D well) from a proposed 7D well pad located on BLM land as listed above and shown on Project Map. The pad would be constructed along a short 150 foot road spur to be built from the existing Pete and Bill Creek Access Road that presently serves the producing South Parachute Federal 22-8 well in Section 8, T8S, R95W. The SP22-8 well was the initial exploratory well drilled in fall, 2005 by Noble on nearby federal lease. The PB Creek Federal 32-24-8C well east of the SP22-8 well in Section 8 was the second APD submitted by Noble for federal lease development in the area. The PB Creek Federal 7-22 well is the third APD submitted by Noble to this office. The existing access road was authorized to Noble under road right-of-way (COC-69031) crossing Sections 1 and 7. The gathering system for the proposed well would tie with the recently installed (fall, 2005) pipeline and waterline from SP22-8 which parallels the existing access road.

Estimated total disturbed area tied to this proposed action would be 4.7 acres including the well pad, short 150 foot access spur and gathering lines. A 5 month (12/1 through 4/30) big game winter timing limitation was placed on the road right-of-way and would be in effect for operations on this pad. Although multiple wells would be planned for this pad, the pad would be initially constructed to accommodate the future planned wells.

The well is considered exploratory and lies adjacent to existing access road, thus qualifying it as GAP waivers as defined in Appendix B of the 1999 SEIS.



Noble's 3rd Proposed Pad w/
1 Federal Directional Well

T8S R96W Sec 7, Lot 5, 6th P.M.
Garfield County, CO

Surface Owner: BLM

Scale 1: 24,000
2/27/08

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 Applications for Permit to Drill (APD) include a drilling program and a multi-point surface use and operations plan that describe details of well pad construction and interim reclamation. The proposed action 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.

The well pad would be located on north-facing slopes south of Pete and Bill Creek, about 15 miles southwest of Parachute. The pad lies within pinon-juniper woodlands with an understory of cheatgrass, native grasses and forbs. No public access is available to the well pads as travel is required across private property east off County Road 306 through Section 1.

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 five standards cover upland soils, riparian systems, plant and animal communities, threatened and endangered species, and water quality. Standards describe conditions needed to sustain public land health and relate to all uses of the public lands. The Battlement Mesa Land Health Assessment (LHA) was completed on the lands affected by the actions addressed in this EA in 2001. Assessment points reviewed during the LHA indicated that the general area surrounding the proposed project site was meeting all the standards at that time.

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 (PM_{10} 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: Cultural resource inventory (GSFO# 1105-13) has been conducted for the pad locations and access road. No historic properties were identified that are eligible for listing on the National Register of Historic Places. Formal consultation was not initiated with the Colorado State Historic Preservation Officer for this well location and a determination of **"No Historic Properties Affected"** was made based upon results of the inventories, the BLM/SHPO National Programmatic Agreement (1997) and Colorado Protocol and (1998) and National Historic Preservation Act (16 U.S.C. 470f).

Environmental Consequences: 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 operator 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 APD.

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 population[1].

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: The proposed action does not involve any floodplains, wetlands or riparian zones.

[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

Analysis on the Public Land Health Standard for riparian systems: The proposed action would not likely prevent health standard 2 from being met.

INVASIVE, NON-NATIVE SPECIES

Affected Environment: The pad lies within pinyon-juniper woodlands with an understory of the cheatgrass and some native grasses and forbs.

Environmental Consequence:
Wind, water, vehicles, animals, and people transport weeds and weed seed. Weeds generally germinate and become established in areas of surface disturbing activities such as road construction and maintenance, vehicular traffic, big game and livestock grazing. The risk of cheatgrass invading and expanding in the project area following disturbance is very high, given that this weed species is already present in the vicinity.

Mitigation:
Standard Condition of Approval is attached requiring the project proponent to monitor for the presence of noxious weeds at least once or twice during the growing season until final reclamation of the pad is complete. The project proponent will promptly treat and control any invading noxious weeds.

Due to the presence of cheatgrass in the area, it may not be possible or practicable to totally eliminate this noxious weed from the reclaimed area. In the case of cheatgrass, interim reclamation will be considered acceptable if cheatgrass and other undesirable vegetation are less than five percent cover, if the adjacent vegetation consists of less than 50 percent undesirables. Cheatgrass will be less than 50 percent cover, if the adjacent vegetation is more than 50 percent undesirables (1999 GSRA Oil and Gas FSEIS). Given the existence of noxious weeds in the vicinity, effective weed management may require controlling weeds outside of the project area in order to prevent reinvasion of the site. A Pesticide Use Proposal must be approved by BLM prior to commencing any herbicide spraying.

The APDs and Conditions of Approval also include measures to re-vegetate the well site with native perennial grasses, shrubs and/or 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 reclamation objectives are achieved.

MIGRATORY BIRDS

Affected Environment: The pad lies within pinyon-juniper woodlands with an understory of cheatgrass, native grasses and forbs. The project area provides cover, forage, and nesting habitat for a variety of migratory birds. A few species found on the U.S. Fish and Wildlife Service's Birds of Conservation Concern list may be present and include the black-throated gray warbler, gray vireo, and pinyon jay.

A raptor survey was completed in May of 2005 by WestWater Engineering and no raptor nests were found in the immediate vicinity of the proposed access road or well pad. However, an accipiter nest and either a red-tailed hawk or golden eagle nest were each found within 1 mile of the proposed well pad and road. It is likely that a variety of raptors forage on and near the proposed access road and well pad.

Environmental Consequences: The proposed action will result in the loss of approximately 4.7 acres of pinyon-juniper woodlands habitat to accommodate the 150 foot access road, gathering lines 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 black-throated gray warbler, gray vireo, and pinyon jay nests and eggs could 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 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 and pad construction, and drilling and completion activities, individual birds will be displaced to adjacent habitats due to noise and human presence. The development of reserve pits in the project area may be expected to attract waterfowl and other migratory birds for purposes of resting, foraging, or as a source of free water. The extent and nature of the problem is not well defined, but management measures must be conservative and relegated to preventing bird contact with produced water and drilling and completion fluids that may pose a problem (e.g., acute or chronic toxicity, compromised insulation). Raptors should be minimally affected as no nests will be disturbed and upland foraging habitat is plentiful in the area.

Mitigation: It will be the responsibility of the operator (Noble/Williams) to comply with the Migratory Bird Treaty Act with respect to "take" of migratory bird species. As such, the operator is requested to prevent use by migratory birds of reserve pits, produced water pits, and evaporation pits, that store or are expected to store fluids which may pose a risk to such birds (e.g., migratory waterfowl, shorebirds, wading birds and raptors) during completion and after completion activities have ceased. Several established methods to prevent bird access are known to work. Methods may include but are not limited to netting, the use of bird-balls, or other alternative methods that effectively prevent bird access/use. Regardless of the method used, it will be applied within 24 hours after completion activities have begun. All lethal and non-lethal events that involve migratory birds will be reported to the Natural Resource Specialist immediately upon their discovery.

NATIVE AMERICAN RELIGIOUS CONCERNS

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

Environmental Consequences/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 the operator and their subcontractors. A standard Education/Discovery Condition of Approval for 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, 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. The BLM Sensitive plant, Harrington's penstemon, is generally

found on open sagebrush habitats between the elevations of 6,500 feet and 9,200 feet. This species is known to occur several miles to the east of the project area near Spruce Gulch, however, the elevation of the project area (6,000 feet) is below the elevational range of Harrington's penstemon and the project area consists mostly of mature pinyon-juniper woodlands.

Environmental Consequences/Mitigation: Based on the lack of potential habitat or occurrence records for any state or federal listed species, 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, flowlines and well pad lie in the Spring Creek Sub-watershed that drains into the Colorado River, below Rifle, Colorado. The ephemeral Pete and Bill Creek lies approximately 130 feet to the north of the pad. 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: No domestic water wells are known in vicinity of the proposed action. No "regional" bedrock aquifer is known to be present.

Environmental Consequences:

Surface Water: Access road and pad construction would result in the removal of vegetation and disturbance of soils that could increase sediment in surface water in the area. There is a risk that the impact to surface waters would be greater then 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.

Mitigation:
Noble Energy Inc will consult with the State of Colorado Water Quality Control Division (for stormwater permits) prior to commencing construction activities related with said permits within the proposed action area. Written documentation to the Authorized Officer is required to indicate that appropriate permits have been obtained or are not required by the permitting 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 spur road and well pad and installation of buried pipelines creating a total surface disturbance of 4.7 acres. The general soil map from the Soil Survey of Rifle Area, Colorado indicates that the proposed pad is located on one soil map unit, 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.

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 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 pad lies within pinyon-juniper woodlands with an understory of cheatgrass, native grasses and forbs. Live pinyon trees would be impacted during the construction work so the Ips beetle problem could be exacerbated by this action.

Environmental Consequences: The planned disturbed area would be an estimated 4.7 acres, representing a short-term loss of herbaceous vegetation and a long-term loss of woody species in the temporary disturbed areas, and a long-term loss of all vegetation on the portions of the pad and road needed for ongoing production activities. With implementation of reclamation practices identified in the COAs, establishment of desirable herbaceous vegetation on the sites can be expected within 2-3 years. The return of shrubs would be expected within 7-10 years; however, trees may take decades to return and 100 years or more to reach maturity. Monitoring of the reclamation would occur as identified in COAs.

Mitigation: Operator will individually cut and chip pinyon 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 comes later. The seeded species will be considered firmly established when at least 50% of the new plants are producing seed.

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 pinyon Ips beetles to the area and increase the natural mortality of pinyons. 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 pad 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. If cheatgrass does not dominate the site following reclamation, 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 spur 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. 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 road spur, short flowline connects, and well pad. The excavation work for the well pad is well-balanced with maximum cut of 23 feet and fill of 25 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 minimal bearing on the watersheds ability to maintain Standard 3 for aquatic wildlife.

WILDLIFE, TERRESTRIAL (includes analysis on Standard 3)

Affected Environment: The proposed spur road, flowline connects, and well pad are 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 use a road and pipeline right-of-way across (COC-69031) BLM lands in Section 1, the standard 5 month (12/1-4/30) restriction has been stipulated in the right-of-way per BLM's Oil & Gas FSEIS approved in 1999. This stipulation on the access road will effectively restrict any drilling or completion work on the pad 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/Mitigation: The proposed action will result in the loss of approximately 4.7 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.

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. 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/Mitigation: Motorized public access is not available in the project area, although the Pete and Bill Creek Access Road to the SP22-8 well traverses through the project area allowing limited motorized use by adjacent landowners. 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, 2006.

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 pad 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: With the 1 well pad proposed for development, 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. A small portion of the disturbed area would be required for gas production in the long term and would not be available for livestock use during this time. 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 damaged during construction of the proposed project will be repaired or replaced by the operator.

VISUAL RESOURCES

Affected Environment: The proposed well pad, spur road and flowline connects would be 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.

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: The proposed pad, short spur road and flowlines would lie within pinon-juniper woodlands 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 long term level of change in the landscape will be moderate and evident but should conform to VRM IV Objectives.

Mitigation:

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, Samantha Clark - Permit Agent, PermitsWest
Brent Murphy, Randy Raines, Mike Bonkiewicz- Noble Energy, Inc.
Dave Dusdal, Land Surveyor

INTERDISCIPLINARY REVIEW:

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

FONSI

CO-140-2006-063 EA

Noble Energy Inc. Permit to Drill 1 Directional Well from Proposed Well Pad in Pete and Bill Creek

PB Creek Federal 7-22

Renamed to Federal 7-11D well on 7D 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 the 1 directional well [PB Creek Federal 7-22 renamed to Federal 7-11D well] 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:

APR 1 0 2006

FONSI

CO-140-2006-062 EA

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

DECISION RECORD

DECISION: It is my decision to approve the Application for Permit to Drill the Mead; 30-51, 30-39, 30-45, 30-46, 30-52, 30-57, 30-58 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: Bill Barter, Natural Resource specialist

SIGNATURE OF AUTHORIZED OFFICIAL: _____
Authorized Officer

DATE SIGNED: APR 1 2 2006

ATTACHMENTS: Map, Conditions of Approval

CONDITIONS OF APPROVAL
APPLICATION FOR PERMIT TO DRILL

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

Well Name	**Well No.**	**API No.**	**Bottom Hole Location**	**Lease**
PB Creek Federal	7-11D (7D pad)		NWNW Sec 7 T08S, 95W	COC-23443

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 Steve Ficklin (970) 947-2800 or Jennifer Gallegos (970) 947-2800 of the Glenwood Springs 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	
Well No.	**MD**	**TVD**
7-11D	1400'	1400'

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.

REGULATORY REMINDERS

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

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

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

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

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

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

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

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

Marty O'Mara C: 970.319.5837 W: 970.947.2825
Petroleum Engineer BLM Fax: 970.947.2829

Steve Ficklin
W: 970.947.2800
Petroleum Engineering Tech.

Jennifer Gallegos
W: 970.244.3039
Petroleum Engineering Tech.

Jim Byers C: 970.319.2532 W: 970.947.2804
Natural Resource Specialist

EPA'S LIST OF NONEXEMPT EXPLORATION AND PRODUCTION WASTES

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

- Unused fracturing fluids or acids

- Gas plant cooling tower cleaning wastes

- Painting wastes

- Oil and gas service company wastes, such as empty drums, drum rinsate, vacuum truck rinsate, sandblast media, painting wastes, spend solvents, spilled chemicals, and waste acids

- Vacuum truck and drum rinsate from trucks and drums, transporting or containing nonexempt waste
- Refinery wastes

- Liquid and solid wastes generated by crude oil and tank bottom reclaimers

- Used equipment lubrication oils

- Waste compressor oil, filters, and blowdown

- Used hydraulic fluids

- Waste solvents

- Waste in transportation pipeline-related pits

- Caustic or acid cleaners

- Boiler cleaning wastes

- Boiler refractory bricks

- Incinerator ash

- Laboratory wastes

- Sanitary wastes

- Pesticide wastes

- Radioactive tracer wastes

- Drums, insulation and miscellaneous solids.

SURFACE USE CONDITIONS OF APPROVAL

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.

Furthermore, prior to commencement of any pad access road or pad construction work, operator will regrade the existing Pete and Bill Creek Access Road ditch from the 24" diameter culvert above the South Centerline of pad to the 36" culvert near SW pad corner to create a well-drained functioning road ditch (minimum 2% relief on ditch grade) that redirects the road drainage into the 36" diameter culvert. Purpose of this work is to ensure that the water and road drainage feeding the 24" pipe does not flow through pipe and eventually onto the constructed pad. To further comply with this requirement, the 24" culvert will be removed from the road prism prior to road and ditch regarding work.

To best achieve the regarding of ditch on Pete and Bill Creek Access road, the 36" culvert referenced above must be reset and extended to better collect expected road drainage from the planned road and ditch regarding work.

2. 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).

3. Operator will be allowed to construct pad to maximum expected pad size necessary to drill and complete the 8 wells proposed for this location. If, after 1 year from spudding the initial well, or 1 year after spudding any successive wells, there are no additional wells actually drilled after the last spud date, the operator will be required to implement and complete standard interim reclamation practices as identified under Reclamation section in these surface Conditions of Approval OR submit proposed best management practices to be approved by the Authorized Officer that would be implemented on the "open" pad to control storm water drainage, weed control, wildlife protection measures, dust abatement plan and/or visual resource concerns.

4. The NE corner of well pad will be rounded off (with longer radius than shown on Exhibit 2 of Pad Layout) to avoid fillslope encroachment into nearby dry gulch.

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. The operator will be required to adhere to the staked centerline road alignment marked on-the-ground and construct the access road with a maximum grade not to exceed 10%. Culvert (36" diameter) will be installed at location shown on submitted Pit and Pad Layout. 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 pad access road will be crowned, ditched, and drained. When rutting within the traveled way becomes greater then 6 inches, gravel will be applied as approved by the Authorized Officer.

7. It will be the responsibility of the operator to comply with the Migratory Bird Treaty Act with respect to "take" of migratory bird species. As such, the operator is requested to prevent use by migratory birds of reserve pits, produced water pits, and evaporation pits, that store or are expected to store fluids which may pose a risk to such birds (e.g., migratory waterfowl, shorebirds, wading birds and raptors) during completion and after completion activities have ceased. Several established methods to prevent bird

access are known to work. Methods may include but are not limited to netting, the use of bird-balls, or other alternative methods that effectively prevent bird access/use. Regardless of the method used, it will be applied within 24 hours after completion activities have begun. All lethal and non-lethal events that involve migratory birds will be reported to the Natural Resource Specialist immediately upon their discovery.

8. 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.

9. Any existing range fence damaged from construction work or rolling material would be replaced and or repaired to the satisfaction of the Authorized Officer.

10. Storage tank facilities for pad will be located near balance point of cut/fill at west side of pad near pad edge. Separator unit will be located within SW quadrant of well pad (depending on use of expanded reserve pit for multi-well scenario) preferably within 50 feet of edge of cutslope to allow adequate reshaping of slopes during interim reclamation.

11. 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.

12. 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.

13. 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.

14. 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.

15. The operator is responsible for monitoring the project area for the presence of all State and Garfield County noxious weeds at least once or twice annually during the growing season until final reclamation is complete. 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.

16. 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.

17. 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.

18 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.

19. 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:

Species of Seed	**Variety**	**Application Rate (lbs/acre)**
Winterfat		1.5
4-wing saltbush	northern latitudes	3.5
Thickspike wheatgrass	Critana	2.0
Western wheatgrass	Arriba	3.0
Bluebunch wheatgrass	P-7	2.0
Indian ricegrass	Paloma	1.0
Bottlebrush squirreltail		1.5
Total		14.5

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. Seed will be used within 12 months of testing. If seed is not used within 12 months, subsequent tests will be required to verify the purity and germination rate of the seed and appropriate adjustments in seeding rate will be made to achieve the above specified rate of PLS/acre.

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 inch 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. Topsoil pile will be seeded with sterile grass or listed seed mix above within 72 hours after topsoil stripping is completed.

Site Protection Practices

The pad will be fenced to exclude livestock grazing for the first two growing seasons or until seeded species become firmly established, whichever comes later. The seeded species will be considered firmly established when at least 50% of the new plants are producing seed. The Authorized Officer will approve the type of fencing. 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.