

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

Statutory Categorical Exclusion, DOI-BLM-CO140-2009-0029

Project: Proposal to Directionally Drill Eleven Federal Wells into Federal Lease COC66921 from the Existing 17F Pad located on Private Land in Cache Creek Area.

Location: Township 7 South, Range 94 West, Section 17, SE $\frac{1}{4}$ NW $\frac{1}{4}$, 6th PM

Proposal: Noble Energy Inc.(Noble) proposes to directionally drill eleven Federal wells from the existing 17F pad located on private land owned by Hilltop 2F2 Ranch, LLC to access fluid minerals in Federal lease COC66921 (Table 1) . Seven fee wells will be drilled from this location beginning in January, 2009 under Colorado Oil and Gas Conservation Commission (COGCC) well permits. Access road and pipeline serving the 17F pad were constructed in October-November, 2008; the routes were constructed entirely on private lands owned by Savage Land Company and Hilltop 2F2 Ranch LLC (Figure 1). The pad construction was completed in November, 2008; conductor pipe was set for the fee wells in late November, 2008 (Figure 2).

Table 1. Surface and Bottomhole Locations of Proposed Federal Wells		
<i>Proposed Wells</i>	<i>Surface Locations</i>	<i>Bottomhole Locations</i>
Rulison Federal 17-11A	1806 feet FNL, 2141 feet FWL SE $\frac{1}{4}$ NW $\frac{1}{4}$, Section 17, T7S R94W	115 feet FNL, 575 feet FWL SW $\frac{1}{4}$ NE $\frac{1}{4}$, Section 17, T7S R94W
Rulison Federal 17-11B	1820 feet FNL, 2147 feet FWL SE $\frac{1}{4}$ NW $\frac{1}{4}$, Section 17, T7S R94W	361 feet FNL, 579 feet FWL NW $\frac{1}{4}$ NW $\frac{1}{4}$, Section 17, T7S R94W
Rulison Federal 17-11C	1826 feet FNL, 2150 feet FWL SE $\frac{1}{4}$ NW $\frac{1}{4}$, Section 17, T7S R94W	664 feet FNL, 586 feet FWL Lot 4, Section 17, T7S R94W
Rulison Federal 17-11D	1827 feet FNL, 2150 feet FWL SE $\frac{1}{4}$ NW $\frac{1}{4}$, Section 17, T7S R94W	1009 feet FNL, 614 feet FWL SW $\frac{1}{4}$ NW $\frac{1}{4}$, Section 17, T7S R94W
Rulison Federal 17-12A	1840 feet FNL, 2156 feet FWL SE $\frac{1}{4}$ NW $\frac{1}{4}$, Section 17, T7S R94W	1283 feet FNL, 621 feet FWL SW $\frac{1}{4}$ NW $\frac{1}{4}$, Section 17, T7S R94W
Rulison Federal 17-12B	1846 feet FNL, 2159 feet FWL SE $\frac{1}{4}$ NW $\frac{1}{4}$, Section 17, T7S R94W	1600 feet FNL, 622 feet FWL SW $\frac{1}{4}$ NW $\frac{1}{4}$, Section 17, T7S R94W
Rulison Federal 17-12C	1868 feet FNL, 2169 feet FWL SE $\frac{1}{4}$ NW $\frac{1}{4}$, Section 17, T7S R94W	1946 feet FNL, 631 feet FWL SW $\frac{1}{4}$ NW $\frac{1}{4}$, Section 17, T7S R94W
Rulison Federal 17-31D	1836 feet FNL, 2165 feet FWL SE $\frac{1}{4}$ NW $\frac{1}{4}$, Section 17, T7S R94W	1065 feet FNL, 1986 feet FWL SW $\frac{1}{4}$ NE $\frac{1}{4}$, Section 17, T7S R94W
Rulison Federal 17-32A	1843 feet FNL, 2168 feet FWL SE $\frac{1}{4}$ NW $\frac{1}{4}$, Section 17, T7S R94W	1369 feet FNL, 1986 feet FEL SW $\frac{1}{4}$ NE $\frac{1}{4}$, Section 17, T7S R94W
Rulison Federal 17-32B	1864 feet FNL, 2177 feet FWL SE $\frac{1}{4}$ NW $\frac{1}{4}$, Section 17, T7S R94W	1693 feet FNL, 1977 feet FEL SW $\frac{1}{4}$ NE $\frac{1}{4}$, Section 17, T7S R94W
Rulison Federal 17-32C	1871 feet FNL, 2180 feet FWL SE $\frac{1}{4}$ NW $\frac{1}{4}$, Section 17, T7S R94W	1988 feet FNL, 1969 feet FEL SW $\frac{1}{4}$ NE $\frac{1}{4}$, Section 17, T7S R94W

Lease Stipulations: Since the 17F pad is located on private land with underlying fee minerals, no BLM lease stipulations or winter timing restrictions would be enforced.

BLM Conditions of Approval: Conditions of Approval (COAs) that would be included on the Applications for Permit to Drill (APDs) are attached.

NEPA Compliance: The following category of Categorical Exclusions pursuant to Section 390 of the Energy Policy Act (Act of 2005) applies to this proposal:

Category #2: *"Drilling an oil and gas location or well pad at a site which drilling has occurred within five (5) years prior to the date of spudding the well."* The initial fee well will be spudded in January, 2009 and the Federal wells would be spudded after that date.

Prepared by: Jim Byers, Natural Resource Specialist 12/1/08

Approval: It is my decision to approve the proposed action with the above referenced terms and conditions:



Allen B. Crockett, Ph.D., J.D.
Supervisory Natural Resource Specialist

12-18-08

Date

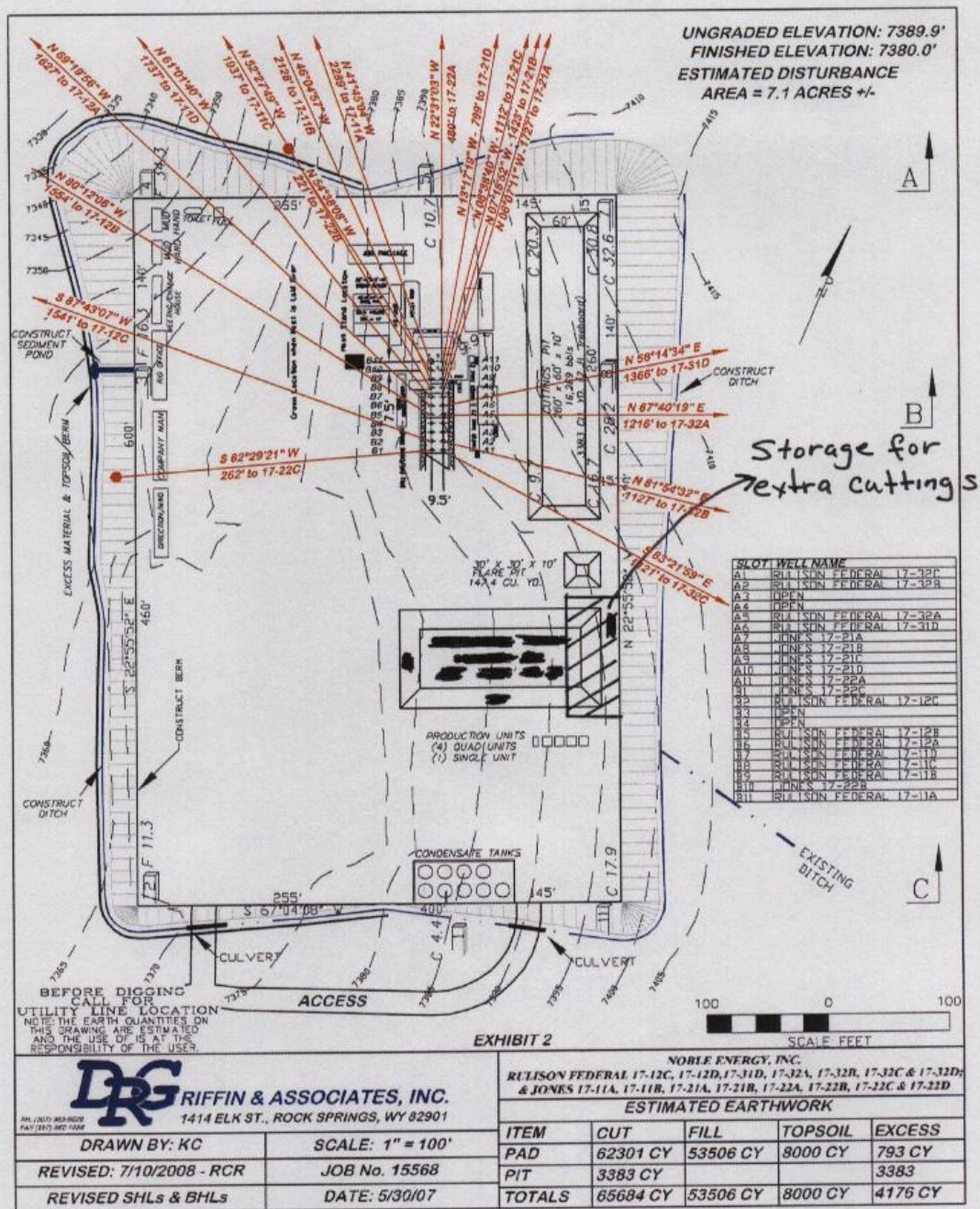


Figure 2. Pad Layout

DOWNHOLE CONDITIONS OF APPROVAL

Applications for Permit to Drill

Company/Operator: Noble Energy, Inc.

Surface Location: SENW, Section 17, Township 7 South, Range 94 West, 6th P.M.

<u>Well Name</u>	<u>Well No.</u>	<u>Bottomhole Location</u>	<u>Lease</u>
Rulison	17-12C	SWNW Sec. 17, T. 7S, R. 94W.	COC-23443
Rulison	17-31D	SWNE Sec. 17, T. 7S, R. 94W.	COC-23443
Rulison	17-32B	SWNE Sec. 17, T. 7S, R. 94W.	COC-23443
Rulison	17-11B	NWNW Sec. 17, T. 7S, R. 94W.	COC-23443
Rulison	17-11D	SWNW Sec. 17, T. 7S, R. 94W.	COC-23443
Rulison	17-11C	NWNW Sec. 17, T. 7S, R. 94W.	COC-66921
Rulison	17-11A	SWNE Sec. 17, T. 7S, R. 94W.	COC-23443
Rulison	17-32C	SWNE Sec. 17, T. 7S, R. 94W.	COC-23443
Rulison	17-32A	SWNE Sec. 17, T. 7S, R. 94W.	COC-23443
Rulison	17-12B	SWNW Sec. 17, T. 7S, R. 94W.	COC-23443
Rulison	17-12A	SWNW Sec. 17, T. 7S, R. 94W.	COC-23443

1. Twenty-four hours *prior* to (a) spudding, (b) conducting BOPE tests, (c) running casing strings, and (d) within twenty-four hours *after* spudding, the GSEO shall be notified. One of the following GSEO's inspectors shall be notified by phone: Steve Ficklin at 970-947-5212, Julie King shall at 970-947-5239, and Todd Sieber at 970-947-5220.
2. A GSEO petroleum engineer shall be contacted for a verbal approval prior to commencing remedial work, plugging operations on newly drilled boreholes, changes within the drilling plan, changes or variances to the BOPE, deviating from conditions of approval, and conducting other operations not specified within the APD. Please contact Dane Geyer at 970-947-5229 (office) or 970-589-6887 (cell) for verbal approvals. As a secondary contact, Bob Hartman may be contacted at 970-244-3041 (office) or 970-250-7002 (cell).
3. If a well control issue arises (e.g. kick, blowout, or water flow), casing failure occurs, or an increase in bradenhead pressure occurs during fracturing operations, Dane Geyer shall be notified within 24 hours from the time of the event.
4. The BOPE shall be tested and conform to Onshore Order #2 for a **5M** system.
5. A casinghead rated to 5,000 psi or greater shall be utilized.
6. An electrical/mechanical mud monitoring equipment shall be functional prior to drilling out the next shoe. As a minimum, this shall include a pit volume totalizer, stroke counter, and flow sensor.
7. Gas detecting equipment shall be installed in the mud return system, prior to drilling out the next shoe, and hydrocarbon gas shall be monitored for pore pressure changes.

8. A gas buster shall be functional and all flare lines effectively anchored in place, prior to drilling out the next shoe. The discharge of the flare lines shall be a minimum of 100' from the well head and targeted at bends. The panic line shall be a separate line (not open inside the buffer tank) and effectively anchored. All lines shall be downwind of the prevailing wind direction and directed into a flare pit, which cannot be the reserve pit. The flare system shall use an automatic ignition. Where noncombustible gas is likely or expected to be vented, the system shall be provided supplemental fuel for ignition and maintain a continuous flare.
9. On the first well drilled on this pad, a FIT shall be performed and results inputted into the IADC log, before drilling more than 20' past the surface casing shoe.
10. Prior to commencing fracturing operations, the production casing shall be tested to the maximum anticipated surface fracture pressure and held for 15 minutes. If leak-off is found, Dane Geyer shall be notified within 24 hours of the failed test, but prior to proceeding with fracturing operations. The test shall be charted and set to a time increment as to take up no less than a quarter of the chart per test. The chart shall be submitted with the well completion report.
11. As a minimum, cement shall be brought to 200' above the Mesaverde. Prior to commencing fracturing operations, a CBL shall be run (from TD to 200' above the TOC) and an electronic copy submitted to the GSEO. If the TOC is lower than required or the cement sheath of poor quality, then, within 48 hours from running the CBL and prior to commencing fracturing operations, a GSEO petroleum engineer shall be notified for further instruction.
12. On the first well drilled on this pad, a triple combo shall be run from TD to the surface casing shoe. This log shall be in accordance with 43 CFR 3162.4(b), which states that the operator shall submit a complete set of electrical/mechanical logs in .LAS format with standard Form 3160-4, Well Completion or Recompletion Report and LOG. Please contact Karen Conrath at 970-947-5235 or karen_conrath@blm.gov for clarification.
13. Submit the (a) mud/drilling log (e.g. Pason disc), (b) driller's event log/operations summary report, (c) production test volumes, (d) directional survey, and (e) Formation Integrity Test results with the well completion report. Please contact Dane Geyer for clarification.

SURFACE USE CONDITIONS OF APPROVAL

DOI-BLM-C0140-2009-0029 SCE

1. Realignment of Existing Ditch. The operator shall realign the existing irrigation ditch on the east-side of pad around the northeast pad perimeter. At time of interim pad reclamation, the ditch course shall be re-established and reconstructed for continued irrigation use.
2. Production Facility Placement and Paint Color. The paint color to be used on all surface facilities including the metal containment rings surrounding the tank battery and pipeline risers shall be Shale Green (5Y 4/2). Unless otherwise approved by Authorized Officer, the production units (separators) shall be located along the south edge of pad and west of the proposed storage tanks (Exhibit 2).
3. Dust Abatement. The operator shall implement dust abatement measures as needed to prevent fugitive dust from vehicular traffic, equipment operations, or wind events. The authorized officer may direct the operator to change the level and type of treatment (watering or application of various dust agents, surfactants, and road surfacing material) if dust abatement measures are observed to be insufficient to prevent fugitive dust.
4. Reclamation. The goals, objectives, timelines, measures, and monitoring methods for final reclamation of oil and gas disturbances are described in Appendix I (Surface Reclamation) of the 1998 Draft Supplemental EIS (DSEIS). Specific measures to follow during interim and temporary (pre-interim) reclamation are described below.

- a. Deadline for Temporary Seeding and Interim Reclamation. Topsoil storage piles, stormwater control features, and cut-and-fill slopes shall undergo temporary seeding to stabilize the material and minimize weed infestations within 30 days following completion of pad construction. Interim reclamation to reduce a well pad to the maximum size needed for production shall be completed within 6 months following completion of the last well planned for the pad.

Both of these deadlines are subject to being extended upon approval of the authorized officer based on season, timing limitations, or other constraints on a case-by-case basis.

- b. Topsoil Stripping, Storage, and Replacement. Topsoil shall be stripped following removal of vegetation during construction of well pads, pipelines, roads, or other surface facilities. This shall include, at a minimum, the upper 6 inches of soil. Any additional topsoil present at a site, such as indicated by color or texture, shall also be stripped. The authorized officer may specify a stripping depth during the onsite visit. The stripped topsoil shall be stored separately from subsoil or other excavated material and replaced prior to final seedbed preparation.
- c. Seedbed Preparation. For cut-and-fill slopes, initial seedbed preparation shall consist of backfilling and recontouring to achieve the configuration specified in the reclamation plan. For compacted areas, initial seedbed preparation shall include ripping to a minimum depth of 18 inches, with a maximum furrow spacing of 2 feet. Where practicable, ripping shall be conducted in two passes at perpendicular directions. Following final contouring, the backfilled or ripped surfaces shall be covered evenly with topsoil.

Final seedbed preparation shall consist of scarifying (raking or harrowing) the spread topsoil prior to seeding. If more than one season has elapsed between final seedbed preparation and seeding,

and if the area is to be broadcast-seeded or hydroseeded, this step shall be repeated no more than 1 day prior to seeding to break up any crust that has formed.

Seedbed preparation is not required for topsoil storage piles or other areas of temporary seeding.

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

- d. Seed Mixes. A seed mix consistent with BLM standards in terms of species and seeding rate for the specific habitat type shall be used on all BLM lands affected by the project (see Attachments 1 and 2 of the letter provided to operators dated May 1, 2008). Note that temporary seeding allows use of a seed mix containing sterile hybrid non-native species in addition to native perennial species.

For private surfaces, the menu-based seed mixes are recommended, but the surface landowner has ultimate authority over the seed mix to be used in reclamation. The seed shall contain no noxious, prohibited, or restricted weed seeds and shall contain no more than 0.5 percent by weight of other weed seeds. Seed may contain up to 2.0 percent of "other crop" seed by weight, including the seed of other agronomic crops and native plants; however, a lower percentage of other crop seed is recommended. Seed tags or other official documentation shall be supplied to the BLM Glenwood Springs Energy Office Ecologist (Beth Brenneman, 970-947-5232 or beth_brenneman@blm.gov) at least 14 days before the date of proposed seeding for acceptance. Seed that does not meet the above criteria shall not be applied to public lands.

- e. Seeding Procedures. Seeding shall be conducted no more than 24 hours following completion of final seedbed preparation.

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

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

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

NOTE: Mulch is not required in areas where erosion potential mandates use of a biodegradable erosion-control blanket (straw matting).

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

7. Paleontological Resources. All persons associated with operations under this authorization shall 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 operator 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 BLM authorized officer.

Where feasible, the operator 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 operator shall work around or set the discovery aside in a safe place to be accessed by the BLM-permitted paleontologist.

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

Pursuant to 43 CFR 10.4(g), the BLM authorized officer shall be notified by telephone, with written confirmation, immediately upon the discovery of human remains, funerary items, sacred objects, or objects of cultural patrimony. Further, pursuant to 43 CFR 10.4 (c) and (d), activities shall stop in the vicinity of the discovery, and the discovery shall be protected for 30 days or until notified by the BLM authorized officer to proceed.

If in connection with operations under this contract, the operator, its contractors, their subcontractors, or the employees of any of them discovers, encounters, or becomes aware of any objects or sites of cultural value or scientific interest such as historic ruins or prehistoric ruins, graves or grave markers, fossils, or artifacts, the operator shall immediately suspend all operations in the vicinity of the cultural resource and shall notify the BLM authorized officer of the findings (16 USC 470h-3, 36 CFR 800.112). Operations may resume at the discovery site upon receipt of written instructions and authorization by the BLM authorized officer. Approval to proceed will be based upon evaluation of the resource. Evaluation shall be by a qualified professional selected by the BLM authorized officer from a Federal agency insofar as practicable. When not practicable, the operator shall bear the cost of the services of a non-Federal professional.

Within five working days, the BLM authorized officer will inform the operator as to:

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

The operator may relocate activities to avoid the expense of mitigation and 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 operator shall be responsible for mitigation costs. The BLM authorized officer will provide technical and procedural guidelines for relocation and/or to

conduct mitigation. Upon verification from the BLM authorized officer that the required mitigation has been completed, the operator will be allowed to resume construction.

Antiquities, historic ruins, prehistoric ruins, and other cultural or paleontological objects of scientific interest that are outside the authorization boundaries but potentially affected, either directly or indirectly, by the proposed action shall also be included in this evaluation or mitigation. Impacts that occur to such resources as a result of the authorized activities shall be mitigated at the operator's cost, including the cost of consultation with Native American groups.

Any person who, without a permit, injures, destroys, excavates, appropriates or removes any historic or prehistoric ruin, artifact, object of antiquity, Native American remains, Native American cultural item, or archaeological resources on public lands is subject to arrest and penalty of law (16 USC 433, 16 USC 470, 18 USC 641, 18 USC 1170, and 18 USC 1361).

9. Raptor Nesting. Raptor nest surveys conducted in Fall 2008 for the 17F pad, road, and pipeline did not result in location of raptor nest structures within 0.25 mile of a well pad or 0.125 mile of an access road, pipeline, or other surface facility. Therefore, a Raptor Nesting Timing Limitation COA is not attached to this APD. Although BLM considers surveys conducted for a NEPA Environmental Assessment to be valid for 5 years, new nests may be built and occupied between the initial surveys and project implementation. To ensure compliance with the Migratory Bird Treaty Act, the operator should schedule construction or drilling activities to begin outside the raptor nesting season (February 1 to August 15) if practicable. If initiation of construction, drilling, or completion during these dates cannot be avoided, the operator is responsible for complying with the Migratory Bird Treaty Act, which prohibits the "take" of birds or active nests (those containing eggs or young), including nest failure caused by noise and human activity. Contact Jeff Cook, Glenwood Springs Energy Office Wildlife Biologist, at 970-947-5231 or jeffrey_cook@blm.gov).
10. Road Maintenance. Roads shall be crowned, ditched, surfaced, drained with culverts and/or water dips, and constructed to BLM Gold Book standards. Initial gravel application shall be a minimum of 6 inches. The operator shall provide timely year-round road maintenance and cleanup on the access roads. A regular schedule for maintenance shall include, but not be limited to, blading, ditch and culvert cleaning, road surface replacement, and dust abatement. When rutting within the traveled way becomes greater than 6 inches, blading and/or gravelling shall be conducted as approved by the authorized officer.
11. Water Quality. At the discretion of Noble and in cooperation with the landowner, a closed-loop drilling system may be used on this pad instead of a reserve pit. If a reserve pit is planned to contain drill cuttings and drilling fluids, it shall be lined with an impermeable liner. No hazardous substances shall be placed in this pit. Following completion activities, the pit liner shall be removed at the landowner's request.
12. Drainage Crossings and Culverts. Culverts at drainage crossings shall be designed and installed to pass a 25-year or greater storm event. On perennial and intermittent streams, culverts shall be designed to allow for passage of aquatic biota. The minimum culvert diameter in any installation for a drainage crossing or road drainage shall be 18 inches. Contact Noel Ludwig, Glenwood Springs Energy Office Hydrologist, at 970-947-5215 or noel_ludwig@blm.gov. Crossings of drainages deemed to be jurisdictional waters of the U.S. pursuant to Section 404 of the Clean Water Act may require additional culvert design capacity. Due to the flashy nature of area drainages and anticipated culvert maintenance, the U.S. Army Corps of Engineers recommends designing drainage crossings for the 100-year event. Contact Sue Nall at 970-243-1199 x16 or susan.nall@usace.army.mil.