

**U.S. Department of the Interior**  
**Bureau of Land Management**  
**Colorado River Valley Field Office**  
**2300 River Frontage Road**  
**Silt, Colorado 81652**

## Section 390 Categorical Exclusions for Oil and Gas Development, Exclusion No. 1

NEPA LOG NUMBER: DOI-BLM-CO-N040-2011-0097-CX (390)

### A. Background

BUREAU OF LAND MANAGEMENT (BLM) OFFICE: Colorado River Valley Field Office (CRVFO), Silt, Colorado

CASEFILE/PROJECT NUMBER: Federal Leases COC46029, COC46032, and COC56040.

PROPOSED ACTION TITLE/TYPE: Proposal to Drill 11 Oil and Gas Wells from the Existing RD11 Pad Located in Rulison Area Authorized by Applications for Permit to Drill (APDs).

LOCATION OF THE PROPOSED ACTION: Township 7 South (T7S), Range 94 West (R94W), Section 11, NW¼NW¼, Sixth Principal Meridian. The existing RD11 pad is located on public land up Porcupine Creek approximately 9.4 miles southwest of Rifle, Colorado. Figure 1 is a project location map. Figure 2 shows the layout of the RD11 pad. Figure 3 shows the location of existing disturbance areas on the private (fee) mineral lease underlying the 320-acre Federal surface parcel in W½ of Section 11 (reverse split estate situation).

DESCRIPTION OF THE PROPOSED ACTION: Encana Oil & Gas (USA) Inc. (“Encana”) proposes to drill eleven oil and gas directional wells from the existing RD11 pad located on public land in the Porcupine Creek area (Table 1). Three of the eleven wells scheduled for drilling would access three separate adjacent Federal leases; the remaining eight wells would access the fee mineral estate underlying the BLM land in W½ of Section 11. The fee wells (permitted by the Colorado Oil and Gas Conservation Commission) have been authorized to occupy the Federal surface under existing BLM right-of-way (COC71879). The RD11 pad was initially constructed in November 2007 under this BLM right-of-way to access six wells to be drilled into the underlying fee leases. No wells have been drilled on this pad to date. The pipeline and access road would continue to serve the RD11 pad in its present condition.

<b>Table 1. Surface and Bottomhole Locations of Proposed Federal Wells</b>			
<i>Proposed Wells</i>	<i>Federal Lease</i>	<i>Surface Locations</i>	<i>Bottomhole Locations</i>
Federal 2-13C (RD11)	COC46029	1,037 feet FNL, 1,199 feet FWL NW¼NW¼, Section 11, T7S R94W	253 feet FSL, 693 feet FWL SW¼SW¼, Section 2, T7S R94W
Federal 10-1D (RD11)	COC46032	1,043 feet FNL, 1,180 feet FWL NW¼NW¼, Section 11, T7S R94W	877 feet FNL, 659 feet FEL NE¼NE¼, Section 10, T7S R94W
Federal 11-7C (RD11)	COC56040	1,037 feet FNL, 1,230 feet FWL NW¼NW¼, Section 11, T7S R94W	2,094 feet FNL, 2,626 feet FEL SW¼NE¼, Section 11, T7S R94W

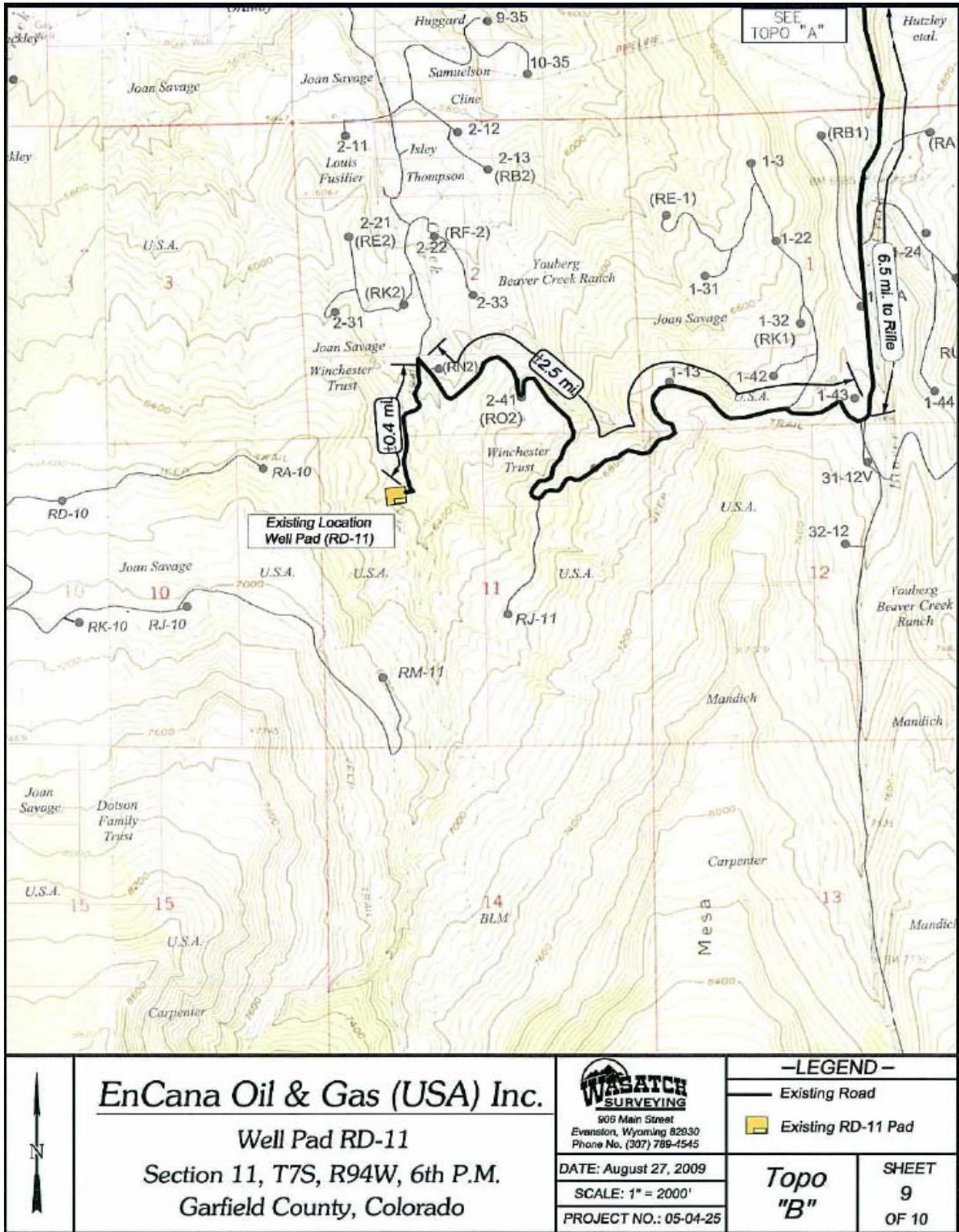


Figure 1. Project Location Map

**EnCana Oil & Gas (USA) Inc.**  
**Well Pad RD-11**  
 NW1/4 NW1/4, SECTION 11, T7S, R94W, 6th P.M.

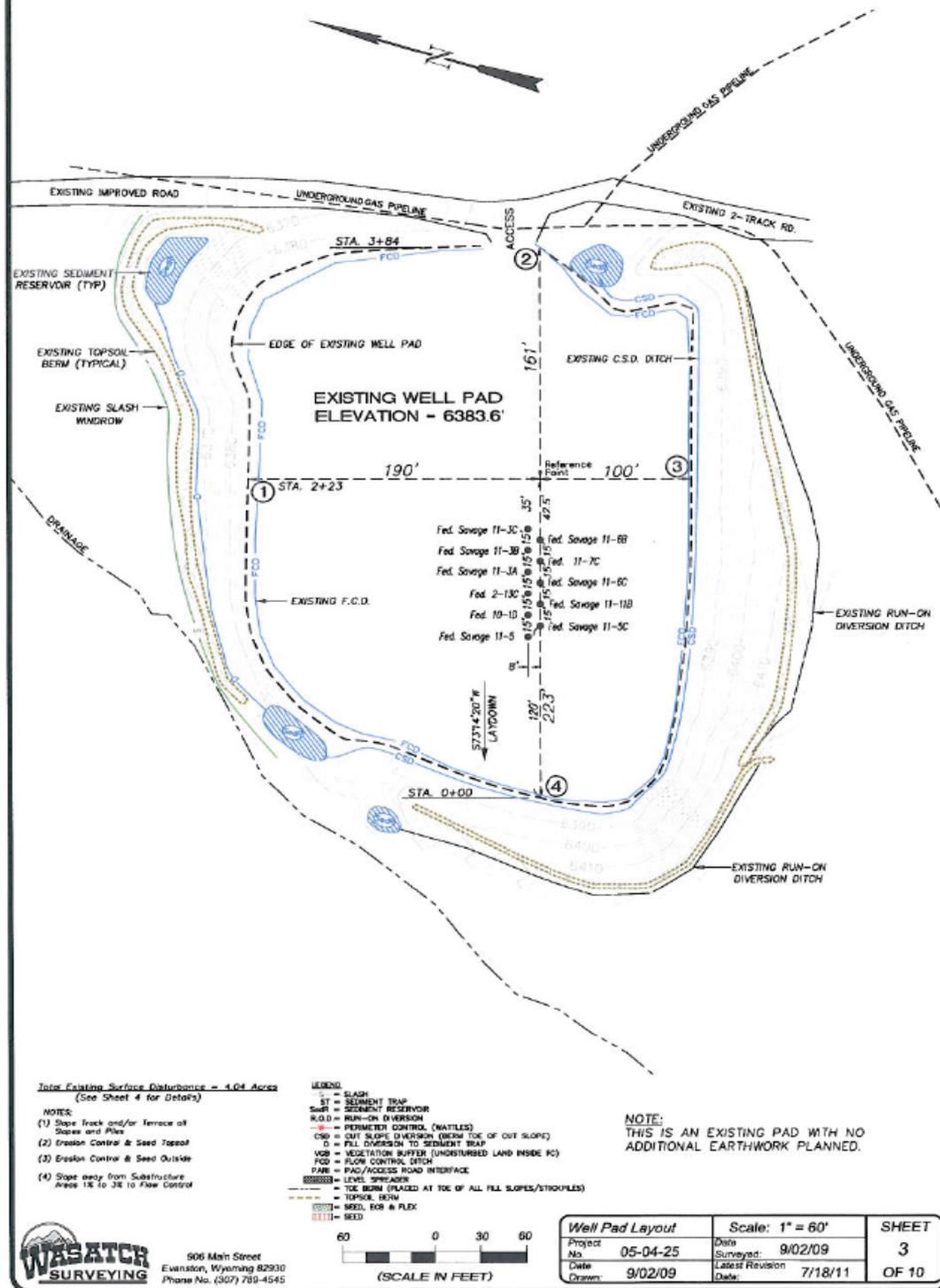


Figure 2. Existing Pad Layout

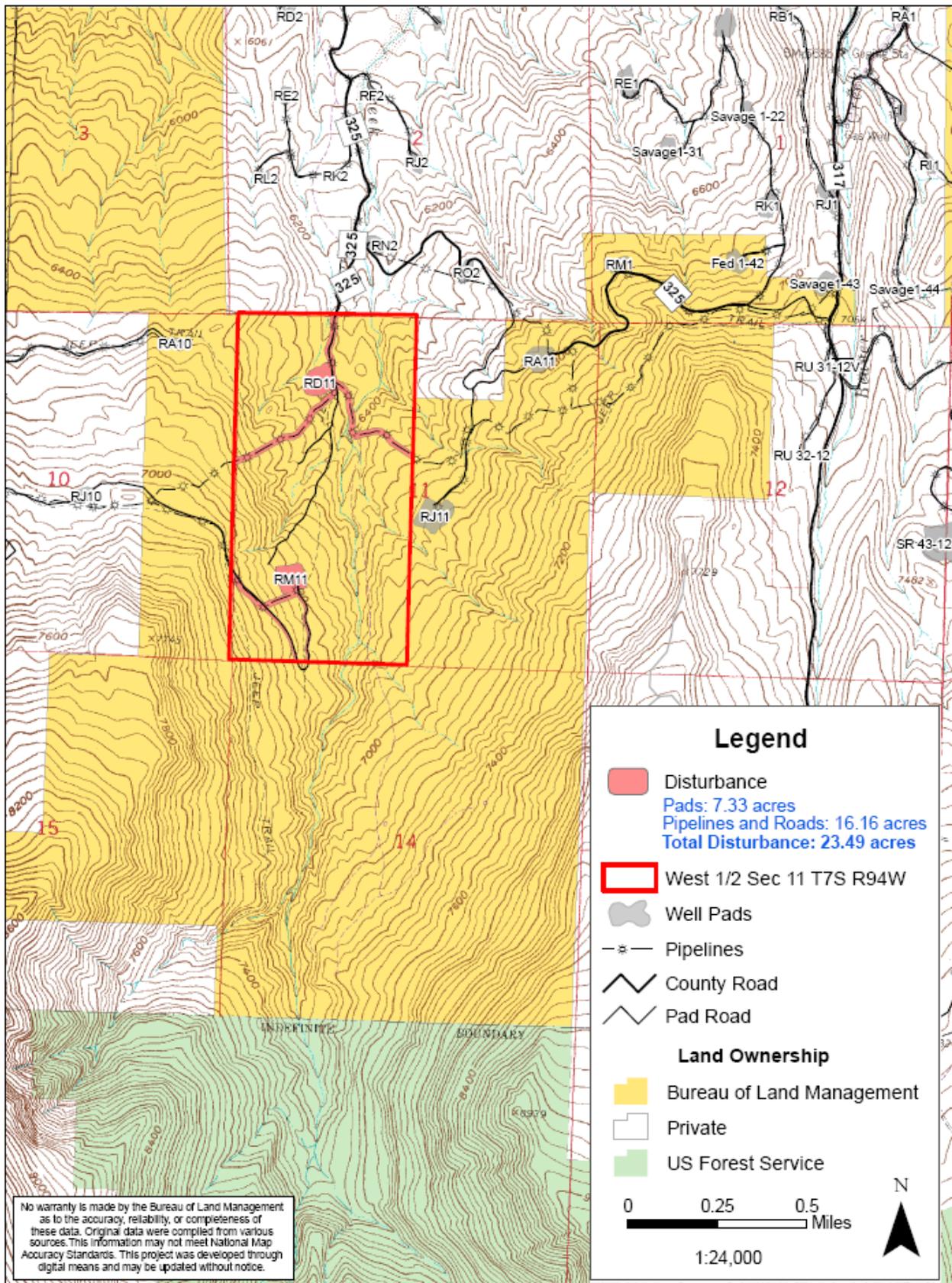


Figure 3. Disturbance Acres for Fee Mineral Lease Underlying BLM Surface in W½, Section 11

No additional surface disturbance would be necessary to drill the eleven planned wells. The current pad disturbance footprint is 4.0 acres (Figure 2). The RD11 pad was specifically analyzed for six new wells in the Rulison Geographic Area Plan (EA #CO140-2006-045) approved on March 13, 2007.

An onsite for the project was conducted on November 4, 2005. Conditions of Approval outlined in the Rulison GAP were applied and adhered to during the initial construction of the RD11 pad. The GAP identified a 60-day winter timing limitation from January 15 through March 15 prohibiting construction, drilling, and completion activities.

Resource surveys, including those for wildlife, special status plant, and cultural resources, were completed relative to the 2007 Rulison GAP/EA approval. Additionally, new raptor survey of the site has been ordered.

**B. Land Use Plan Conformance**

Land Use Plan (LUP) Name: The current land use plan is the *Glenwood Springs Resource Management Plan* (RMP) (BLM 1984, revised 1988). Relevant amendments include the *Oil and Gas Plan Amendment to the Glenwood Springs Resource Management Plan* (BLM 1991) and the *Oil & Gas Leasing & Development Record of Decision and Resource Management Plan Amendment* (BLM 1999).

Date Approved/Amended: *Oil and Gas Plan Amendment to the Glenwood Springs Resource Management Plan* (BLM 1991) – approved November 27, 1991; *Oil & Gas Leasing & Development Record of Decision and Resource Management Plan Amendment* (BLM 1999) – approved March 24, 1999.

Determination of Conformance: The 1991 plan amendment for oil and gas (BLM 1991) included the following at page 3: “697,720 acres of BLM-administered mineral estate within the Glenwood Springs Resource Area (GSRA) are open to oil and gas leasing and development, subject to lease terms and (as applicable) lease stipulations” (BLM 1991, page 3). This decision was carried forward into the 1999 plan amendment for oil and gas.

The 1999 plan amendment for oil and gas (BLM 1999) included the following at page 15: “In areas being actively developed, the operator must submit a Geographic Area Proposal (GAP) that describes a minimum of 2 to 3 years of activity for operator controlled leases within a reasonable geographic area.” The current project is in an area designated as open to oil and gas leasing and development, and this CX has been prepared pursuant to a GAP (Rulison Geographic Area Plan, EA #CO140-2006-045). Therefore, the project conforms to the current LUP, as amended.

**C. Compliance with NEPA**

Consistency with Category: Note: All of the questions listed in Table 2 must be answered with “Yes” in order to use this CX.

Table 2. Project Screening Questions		
1. Will the proposed action disturb less than 5 acres?	<u>Yes</u>	No
2. Is the current amount of surface disturbance on the entire leasehold, plus the proposed action, less than 150 acres?	<u>Yes</u>	No
3. Was the proposed action adequately analyzed in an existing site-specific National Environmental Policy Act (NEPA) document?	<u>Yes</u>	No

NEPA Document Name: Rulison Geographic Area Plan (EA #CO140-2006-045) approved on March 13, 2007 specifically analyzed the construction and drilling of directional wells on the RD11 pad.

Extraordinary Circumstances Review: Any “Yes” answers in Table 3 preclude use of the CX.

<b>Table 3. Extraordinary Circumstances</b>		
1. May have significant impacts on public health and safety.	Yes	<b><u>No</u></b>
2. May have significant impacts on such natural resources and unique geographic characteristics as historic or cultural resources; park, recreation or refuge lands; wilderness areas; wild and scenic rivers; national natural landmarks; sole or principal drinking water aquifers; prime farmlands; wetlands (Executive Order 11990); floodplains (Executive Order 119880; national monument; migratory birds; and other ecologically significant or critical areas.	Yes	<b><u>No</u></b>
3. May have highly controversial environmental effects or involve unresolved conflicts concerning alternative uses of available resources (NEPA Section 102 (2)(E)).	Yes	<b><u>No</u></b>
4. May have highly uncertain and potentially significant environmental effects or involve unique or unknown environmental risks.	Yes	<b><u>No</u></b>
5. May establish a precedent for future action or represent a decision in principle about future actions with potentially significant environmental effects.	Yes	<b><u>No</u></b>
6. May have a direct relationship to other actions with individually insignificant but cumulatively significant environmental effects.	Yes	<b><u>No</u></b>
7. May have significant impacts on properties listed or eligible for listing, on the National Register of Historic Places as determined by either the bureau or office.	Yes	<b><u>No</u></b>
8. May have significant impacts on species listed or proposed to be listed, on the List of Endangered or Threatened Species, or have significant impacts on designated Critical Habitat for these species.	Yes	<b><u>No</u></b>
9. May violate a Federal law, or a state, local, or tribal law or requirement imposed for the protection of the environment.	Yes	<b><u>No</u></b>
10. May have a disproportionately high and adverse effect on low income or minority populations (Executive Order 12898).	Yes	<b><u>No</u></b>
11. May limit access to and ceremonial use of Indian sacred sites on Federal lands by Indian religious practitioners or significantly adversely affect the physical integrity of such sacred sites (Executive Order 13007).	Yes	<b><u>No</u></b>
12. May contribute to the introduction, continued existence, or spread of noxious weed or non-native invasive species known to occur in the area or actions that may promote the introduction, growth, or expansion of the range of such species (Federal Noxious Weed Control Act and Executive Order 13112).	Yes	<b><u>No</u></b>

This categorical exclusion is appropriate for the specific situation of this project because no extraordinary circumstances exist that would potentially have impacts that may significantly affect the environment. The proposed action has been reviewed, and none of the extraordinary circumstances described in 43 CFR 46.215 applies.

Persons and/or Agencies Consulted:

Encana Oil & Gas (USA) Inc.: Jevin Croteau, Miracle Pfister, Scott Parker, Bryan Whiteley, Gil Leiker, Bob Anderson

Interdisciplinary Review: BLM staff from the CRVFO listed in Table 4 participated in the preparation of this SCX, including review of survey results submitted by the Operator’s consultants, evaluation of impacts likely to occur from implementation of the proposed action, and identification of appropriate COAs.

**Table 4. BLM Interdisciplinary Team Authors and Reviewers**

<i>Name</i>	<i>Title</i>	<i>Areas of Participation</i>
Beth Brenneman	Ecologist	Invasive Non-native Species, Special Status Plants, Vegetation
John Brogan	Archaeologist	Cultural Resources, Native American Religious Concerns
Jim Byers	Natural Resource Specialist	Project Lead, Access & Transportation, Range Management, Socio-Economics
Allen Crockett, Ph.D.	Supervisory NRS/Phys. Sci.	NEPA Review
William Howell	Petroleum Engineer	Downhole COAs
Shauna Kocman, Ph.D.	Hydrologist	Air Quality, Noise, Soils, Surface Water, Waters of the U.S.
Julie McGrew	Natural Resource Specialist	Visual Resources
Sylvia Ringer	Wildlife Biologist	Migratory Birds, Special Status Species, Aquatic and Terrestrial
Todd Sieber	Geologist	Geology and Minerals, Groundwater, Paleontology
D.J. Beaupeurt	Lands/Realty Specialist	Realty, Rights-of-Way Grants

The proposed action was presented to the Colorado River Valley Field Office interdisciplinary team on July 6, 2011. The SCX was posted on the CRVFO NEPA website on July 6, 2011, for solicitation of public comment.

**MITIGATION:** Conditions of approval to be attached to individual APDs for Federal oil and gas wells to be located on the RD11 pad are listed in Attachment A.

Name of Preparer: Jim Byers Date: 7/29/11

**D. Signature**

The proposed action is statutorily categorically excluded from further NEPA documentation in accordance with Section 390(b)(1) of the Energy Policy Act of 2005, which provides for exclusion of individual surface disturbances of less than 5 acres so long as the total surface disturbance on the lease is not greater than 150 acres and site-specific analysis in a document prepared pursuant to NEPA has been previously completed.

Authorizing Official: Allen Crockett Date: 7/29/11

### **E. Decision and Rationale for Action**

I have decided to approve the Drilling of Eleven Wells on the Existing RD11 Pad with the stipulations and conditions of approval identified in Attachment A of this form. The stipulations and COAs are required by this decision, and variance from these stipulations and COAs during project implementation may require further NEPA review.

I have reviewed Section B, Land Use Plan Conformance, and Section C, Compliance with NEPA, and have determined that the proposed activity is in conformance with the applicable land use plan(s) and referenced NEPA documents. I have also evaluated the proposal to ensure the appropriate exclusion category as described in Section 390 of the Energy Policy Act of 2005 has been correctly applied. I have determined, that no further environmental analysis is required.



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

2/29/11  
Date

### **F. Administrative Review or Appeal Opportunities**

#### Applications for Permit to Drill and Sundry Notices

Under BLM regulations addressed in 43 CFR 3165, a decision to approve the Application for Permit to Drill is subject to appeal and administrative review. An administrative review must be conducted in accordance with 43 CFR 3165.3 and must take place prior to pursuing an appeal to the Interior Board of Land Appeals.

Any adversely affected party may request an administrative review, before the State Director, either with or without oral presentation. Such a request must include information required under 43 CFR 3165.3(b), State Director Review (SDR), including all supporting documentation. Such a request must be filed in writing with the BLM Colorado State Office, 2850 Youngfield Street, Lakewood, Colorado 80215 within 20 business days from the date the decision is received or considered to have been received. Upon request and showing of good cause, an extension for submitting supporting/additional data may be granted by the State Director.

Any party who is adversely affected by the State Director's decision may appeal that decision to the Interior Board of Land Appeals in accordance with 43 CFR 3165.4.

## **Surface Use Conditions of Approval DOI-BLM-CO-N040-2011-0097-CX (390)**

1. Administrative Notification. The operator shall notify the BLM representative at least 48 hours prior to initiation of construction. If requested by the BLM representative, the operator shall schedule a pre-construction meeting, including key operator and contractor personnel, to ensure that any unresolved issues are fully addressed prior to initiation of surface-disturbing activities or placement of production facilities.
2. 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.
3. 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, combusters, and pipeline risers shall be **Shadow Gray**. The final location of separators and storage tanks will be determined after the pad has been constructed.
4. Dust Abatement. The operator shall implement dust abatement measures as needed to prevent fugitive dust from vehicular traffic, equipment operations, or wind events. The BLM 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.
5. 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. Reclamation Plans. In areas that have low reclamation potential or are especially challenging to restore, reclamation plans will be required prior to APD approval. The plan shall contain the following components: detailed reclamation plans, which include contours and indicate irregular rather than smooth contours as appropriate for visual and ecological benefit; timeline for drilling completion, interim reclamation earthwork, and seeding; soil test results and/or a soil profile description; amendments to be used; soil treatment techniques such as roughening, pocking, and terracing; erosion control techniques such as hydromulch, blankets/matting, and wattles; and visual mitigations if in a sensitive VRM area.
  - b. Deadline for Interim Reclamation Earthwork and Seeding. Interim reclamation to reduce a well pad to the maximum size needed for production, including earthwork and seeding of the interim reclaimed areas, shall be completed within 6 months following completion of the last well planned to be drilled on that pad as part of a continuous operation. If a period of greater than one year is expected to occur between drilling episodes, BLM may require implementation of all or part of the interim reclamation program.

Reclamation, including seeding, of temporarily disturbed areas along roads and pipelines, and of topsoil piles and berms, shall be completed within 30 days following completion of construction. Any such area on which construction is completed prior to December 1 shall be seeded during the remainder of the early winter season instead of during the following spring, unless BLM approves otherwise based on weather. If road or pipeline construction occurs discontinuously (e.g., new segments installed as new pads are built) or continuously but with a total duration greater than 30 days, reclamation, including seeding, shall be phased such that no portion of the temporarily disturbed area remains in an unreclaimed condition for longer than 30 days. BLM may authorize deviation from this requirement based on the season and the amount of work remaining on the entirety of the road or pipeline when the 30-day period has expired.

If requested by the project lead NRS for a specific pad or group of pads, the operator shall contact the NRS by telephone or email approximately 72 hours before reclamation and reseeding begin. This will allow the NRS to schedule a pre-reclamation field visit if needed to ensure that all parties are in agreement and provide time for adjustments to the plan before work is initiated.

The deadlines for seeding described above are subject to extension upon approval of the BLM based on season, timing limitations, or other constraints on a case-by-case basis. If the BLM approves an extension for seeding, the operator may be required to stabilize the reclaimed surfaces using hydromulch, erosion matting, or other method until seeding is implemented.

- c. Topsoil Stripping, Storage, and Replacement. All topsoil shall be stripped following removal of vegetation during construction of well pads, pipelines, roads, or other surface facilities. In areas of thin soil, a minimum of the upper 6 inches of surficial material shall be stripped. The BLM may specify a stripping depth during the onsite visit or based on subsequent information regarding soil thickness and suitability. The stripped topsoil shall be stored separately from subsoil or other excavated material and replaced prior to final seedbed preparation.
- d. 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.

- e. 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 no longer allows the use of sterile hybrid non-native 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 submitted to BLM 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.

- f. 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 or by hydroseeding and hydromulching. Hydroseeding and hydromulching shall be conducted in two separate applications to ensure adequate contact of seeds with the soil.

If interim revegetation is unsuccessful, the operator shall implement subsequent reseeding until interim reclamation standards are met.

- g. Mulch. Mulch shall be applied within 24 hours following completion of seeding. Mulch may consist of either hydromulch or of certified weed-free straw or certified weed-free native grass hay crimped into the soil.

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

- h. 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 BLM. Cut-and-fill slopes along drainages or in areas with high erosion potential shall also be protected from erosion using hydromulch designed specifically for erosion control or biodegradable blankets/matting, bales, or wattles of weed-free straw or weed-free native grass hay. A well-anchored fabric silt fence shall also be placed at the toe of cut-and-fill slopes along drainages or to protect other sensitive areas from deposition of soils eroded off the slopes. Additional BMPs shall be employed as necessary to reduce soil erosion and offsite transport of sediments.
- i. Site Protection. The pad shall be fenced to BLM standards to exclude livestock grazing for the first two growing seasons or until seeded species are firmly established, whichever comes later. The seeded species will be considered firmly established when at least 50 percent of the new plants are producing seed. The BLM will approve the type of fencing.
- j. Monitoring. The operator shall conduct annual monitoring surveys of all sites categorized as “operator reclamation in progress” and shall submit an annual monitoring report of these sites to the BLM by **December 31** of each year. The monitoring program shall use the four Reclamation Categories defined in Appendix I of the 1998 DSEIS to assess progress toward reclamation objectives. The annual report shall document whether attainment of reclamation objectives appears likely. If one or more objectives appear unlikely to be achieved, the report shall identify appropriate corrective actions. Upon review and approval of the report by the BLM, the operator shall be responsible for implementing the corrective actions or other measures specified by the BLM.

6. Weed Control. The operator shall regularly monitor and promptly control noxious weeds or other undesirable plant species as set forth in the Glenwood Springs Field Office *Noxious and Invasive Weed Management Plan for Oil and Gas Operators*, dated March 2007. A Pesticide Use Proposal (PUP) must be approved by the BLM prior to the use of herbicides. Annual weed monitoring reports shall be submitted to BLM by **December 1**.
7. Fossil 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. Migratory Birds. It shall be the responsibility of the operator to comply with the Migratory Bird Treaty Act (MBTA) with respect to “take” of migratory bird species. Under the MBTA, “take” means to pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct. The operator shall prevent use by migratory birds of any pit containing fluids associated with oil or gas operations, including but not limited to reserve pits, produced water pits, frac-water pits, cuttings trenches (if covered by water/fluid), and evaporation pits. Fluids in these pits may pose a risk to migratory birds (e.g., waterfowl, shorebirds, wading birds, songbirds, and raptors) as a result of ingestion, absorption through the skin, or interference with buoyancy and temperature regulation. Regardless of the method used, it shall be in place within 24 hours following the placement of fluids into a pit. Because of high toxicity to birds, oil slicks and oil sheens should immediately be skimmed off the surface of any pit that is not netted. The most effective way to eliminate risk to migratory birds is prompt drainage, closure, and reclamation of pits, which is strongly encouraged. All mortality or injury to species protected by the MBTA shall be reported immediately to the BLM project lead and to the USFWS representative in the BLM Field Office at 970-876-9051 (Creed Clayton) and visit <http://www.fws.gov/mountain-prairie/contaminants/oilpits.htm>.
10. Raptor Nesting. To protect nesting raptors, a survey shall be conducted prior to construction, drilling, or completion activities that are to begin during the raptor nesting season (**February 1 to August 15**). The survey shall include all potential nesting habitat within 0.25 mile of a well pad or 0.125 mile of an access road, pipeline, or other surface facility. Results of the survey shall be submitted to the BLM. If a raptor nest is located within the buffer widths specified above, a 60-day raptor nesting TL will be applied by the BLM to preclude initiation of construction, drilling, and completion activities during the period of April 15 to May 15. The operator is responsible for complying with the MBTA, which prohibits the “take” of birds or of active nests (those containing eggs or young), including nest failure caused by human activity (see COA for Migratory Birds).
11. Big Game Winter Range Timing Limitation. To minimize impacts to wintering big game, no construction, drilling or completion activities shall occur during a Timing Limitation (TL) period from **January 1 to March 1**. To further reduce impacts to wintering big game, remote sensing should be used for production monitoring, and unavoidable monitoring or maintenance activities should be conducted between 9 a.m. and 3 p.m., to the extent practicable. These additional recommendations apply to the period from December 1 to April 30.

12. Birds of Conservation Concern. Pursuant to BLM Instruction Memorandum 2008-050, all surface-disturbing activities are prohibited from **May 1 to July 1** to reduce impacts to Birds of Conservation Concern (BCC). An exception to this COA will be granted if nesting surveys conducted no more than one week prior to surface-disturbing activities indicate that no BCC species are nesting within 30 meters (100 feet) of the area to be disturbed. Nesting shall be deemed to be occurring if a territorial (singing) male is present within the distance specified above. Nesting surveys shall include an aural survey for diagnostic vocalizations in conjunction with a visual survey for adults and nests. Surveys shall be conducted by a qualified breeding bird surveyor between sunrise and 10:00 AM under favorable conditions for detecting and identifying a BCC species. This provision does not apply to ongoing construction, drilling, or completion activities that are initiated prior to May 1 and continue into the 60-day period at the same location.
13. Bald and Golden Eagles. It shall be the responsibility of the operator to comply with the Bald and Golden Eagle Protection Act (Eagle Act) with respect to “take” of either eagle species. Under the Eagle Act, “take” includes to pursue, shoot, shoot at, poison, wound, kill, capture, trap, collect, molest and disturb. “Disturb” means to agitate or bother a bald or golden eagle to a degree that causes, or is likely to cause, based on the best scientific information available, (1) injury to an eagle; (2) a decrease in its productivity by substantially interfering with normal breeding, feeding, or sheltering behavior; or (3) nest abandonment by substantially interfering with normal breeding, feeding, or sheltering behavior. Avoidance of eagle nest sites, particularly during the nesting season, is the primary and preferred method to avoid a take. Any oil or gas construction, drilling, or completion activities planned within 0.5 mile of a bald or golden eagle nest, or other associated activities greater than 0.5 miles from a nest that may disturb eagles, should be coordinated with the BLM project lead and BLM wildlife biologist and the USFWS representative in the BLM Field Office (970-876-9051).
14. Windrowing of Topsoil. Topsoil shall be windrowed around the pad perimeter to create a berm that limits and redirects stormwater runoff and extends the viability of the topsoil per BLM Topsoil Best Management Practices (BLM 2009 PowerPoint presentation available upon request from Glenwood Springs Field Office). Topsoil shall also be windrowed, segregated, and stored along pipelines and roads for later spreading across the disturbed corridor during final reclamation. Topsoil berms shall be promptly seeded to maintain soil microbial activity, reduce erosion, and minimize weed establishment.
15. Interim Reclamation Related to Drilling Phases. Within 1 year of completion of all exploratory wells proposed on a pad or within one year of completion of all development wells on a pad (whichever the situation may be), the operator would stabilize the disturbed area by recontouring, mulching, providing run-off and erosion control, replacing topsoil as directed, and seeding with BLM-prescribed native seed mixes (or landowner requested seed mix on Fee surface), and conducting weed control, as necessary. In cases where the exploratory drilling and development drilling on a single pad occur more than 1 year apart, slopes shall be recontoured to the extent necessary to accommodate seeding, and seed mixes required by BLM or requested by the private landowner shall be applied to stabilize the soil between visits per direction of the BLM.

**DOWNHOLE CONDITIONS OF APPROVAL  
Applications for Permit to Drill**

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

**Surface Location:** NWNW, Section 11, Township 7 South, Range 94 West, 6<sup>th</sup> P.M.

<u>Well Name</u>	<u>Well No. (Pad)</u>	<u>Bottomhole Location</u>	<u>Lease/Unit</u>
Federal	2-13C (RD11)	SWSW, Sec 2, T7S, R94W	COC46029/COC60679
Federal	10-1D (RD11)	NWNW, Sec 10, T7S, R94W	COC46032/COC60679
Federal	11-7C (RD11)	SWNE, Sec 11, T7S, R94W	COC56040/COC60679

- Twenty-four hours *prior* to (a) spudding, (b) conducting BOPE tests, (c) cementing/running casing strings, and (d) within twenty-four hours *after* spudding, the CRVFO shall be notified. One of the following CRVFOs inspectors shall be notified by phone. The contact number for all notifications is: 970-876-9064. The BLM CRVFO inspectors are Julie King, Lead PET; David Giboo, PET; Greg Rios, PET; and Alan White, PET.
- A CRVFO 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, sidetracks, changes or variances to the BOPE, deviating from conditions of approval, and conducting other operations not specified within the APD. Contact Will Howell at 970-876-9049 (office) or 970-319-5837(cell) for verbal approvals.
- If a well control issue (e.g. kick, blowout, water flow, casing failure, or bradenhead pressure increase) arises during drilling or completions operations, Will Howell 970-876-9049(office), 970-319-5837(cell) shall be notified within 24 hours from the time of the event. IADC/Driller’s Logs and Pason Logs (mud logs) will be forwarded to CRVFO, Will Howell, 2300 River Frontage Road, Silt, CO 81652 within 24 hours of a well control event.
- The BOPE shall be tested and conform to Onshore Order #2 for a **5M** system and be recorded in the IADC/Driller’s log. A casing head rated to 5,000 psi or greater shall be utilized.
- Flexible choke lines shall meet or exceed the API SPEC 16C requirements. Flexible choke lines shall be effectively anchored, have flanged connections, and configured to the manufacturer’s specifications. Manufacturer specifications shall be kept with the drilling rig at all times and immediately supplied to the authorized officer/inspector upon request. Specifications, at a minimum, shall include acceptable bend radius, heat range, anchoring, and the working pressure. All flexible choke lines shall be free of gouges, deformation, and as straight/short as possible.
- Prior to drilling out the surface casing shoe, an electrical/mechanical mud monitoring equipment shall be function tested. As a minimum, this equipment shall include a trip tank or equivalent calibrated mud tank, pit volume totalizer, stroke counter, and flow sensor.
- Prior to drilling out the surface casing shoe, gas detecting equipment shall be installed in the mud return system. The mud system shall be monitored for hydrocarbon gas/pore pressure changes, rate of penetration, and fluid gain/loss.
- Prior to drilling out the surface casing shoe, a gas buster shall be functional and all flare lines effectively anchored in place. 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. A total length of 1,415 to 1,430 feet of Surface Casing will be required on these wells to protect potential water source/aquifers and control loss circulation zones.
10. After the surface/intermediate casing is cemented, a Pressure Integrity Test/Mud Equivalency Test/FIT will be performed on the first well drilled in accordance with OOGO No. 2; Sec. III, B.1. i. in order to make sure the surface/intermediate casing is set in a competent formation. This is not a Leak-off Test, but a formation competency test, insuring the formation at the shoe is tested to the minimum mud weight equivalent anticipated to control the formation pressure to the next casing shoe depth or TD. Submit the results from the test via email (whowell@blm.gov) on the first well drilled on the pad or any horizontal well and record results in the IADC log. Report failed test to Will Howell at CRVFO, 970-876-9049 (o) or 970-319-5837.
11. As a minimum, cement shall be brought to 200 feet above the Mesaverde. After WOC for the production casing, a CBL shall be run to verify the TOC and an electronic copy in .las and .pdf format will be submitted to CRVFO, Will Howell, 2300 River Frontage Road, Silt, CO 81652 within 48 hours. 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 CRVFO petroleum engineer shall be notified for remedial operations. Please evaluate the top of cement on the first cement job on the pad (Temperature Log).
12. On the first well drilled on this pad, a triple combo open-hole log shall be run from the base of the surface borehole to surface, and from TD to bottom of surface casing shoe. This log shall be in submitted within 48 hours in .las and .pdf format to CRVFO, Will Howell/Todd Sieber, 2300 River Frontage Road, Silt, CO 81652. Contact Todd Sieber at 970-876-9063 or asieber@blm.gov for clarification.
13. Submit the (a) mud/drilling log (e.g. Pason disc), (b) driller's event log/operations summary report, (c) directional survey, and (d) Pressure Integrity Test results within 30 days of cementing the production casing per 43 CFR 3160-9.
14. During hydraulic frac operations, monitor the bradenhead/casing head pressures throughout the frac job. Any sharp rise in annular pressure (+/- 40 psi or greater) will terminate the frac operations in order to determine well/wellbore integrity. Notify BLM CRVFO engineer/inspector of annular pressure increase.
15. Prior to commencing fracturing operations, the production casing shall be tested to the maximum anticipated surface treating/fracture pressure and held for 15 minutes without a 2% leak-off. If leak-off is found, Will Howell 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 Form 3160-4, Well Completion Report.
16. Submit a monthly report of operations or production per CFR 3162.4-3 including any production from these wells in MCFPD, BOPD, BWPD with FTP/SITP until the completion report (Form 3160-4) is filed.
17. Per CFR 3162.4-1(c), not later than the 5<sup>th</sup> 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 a 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.