

**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

**NUMBER:** DOI-BLM-CO-N040-2011-0004-CX (390)

**CASEFILE/PROJECT NUMBER:** COC52583 and COC54737 (bottomholes)

**PROJECT NAME:** Proposal to Drill Twelve Federal Wells and Eight Fee Wells from the Existing K28NW Pad Located in the Helmer Gulch Area South of Rifle, Colorado.

**LEGAL DESCRIPTION:** Township 6 South (T6S), Range 93 West (R93W), Section 28, NE $\frac{1}{4}$ SW $\frac{1}{4}$ , Sixth Principal Meridian.

**APPLICANT:** EnCana Oil & Gas (USA) Inc.

**DESCRIPTION OF PROPOSED ACTION:** EnCana Oil & Gas (USA) Inc. (“EnCana”) proposes to directionally drill twelve Federal and eight fee oil and gas wells from the existing K28NW pad located on private land up Helmer Gulch. See Table 1. The proposed pad expansion would occur approximately 4 miles south of Rifle, Garfield County, Colorado (Figure 1). The pad presently supports three producing oil and gas wells; the pad is in a state of acceptable interim reclamation (Figure 2).

<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>
Benjamin Federal 28-12B2 (K28NW)	COC52583 (BH)	1601 feet FSL, 2532 feet FWL NE $\frac{1}{4}$ SW $\frac{1}{4}$ , Section 28, T6S R93W	2000 feet FSL, 240 feet FWL NW $\frac{1}{4}$ SW $\frac{1}{4}$ , Section 28, T6S R93W
Benjamin Federal 28-12C1 (K28NW)	COC52583 (BH)	1584 feet FSL, 2532 feet FWL NE $\frac{1}{4}$ SW $\frac{1}{4}$ , Section 28, T6S R93W	1670 feet FSL, 240 feet FWL NW $\frac{1}{4}$ SW $\frac{1}{4}$ , Section 28, T6S R93W
Benjamin Federal 28-12C2 (K28NW)	COC52583 (BH)	1645 feet FSL, 2426 feet FWL NE $\frac{1}{4}$ SW $\frac{1}{4}$ , Section 28, T6S R93W	1360 feet FSL, 240 feet FWL NW $\frac{1}{4}$ SW $\frac{1}{4}$ , Section 28, T6S R93W
Benjamin Federal 28-13B1 (K28NW)	COC52583 (BH)	1636 feet FSL, 2433 feet FWL NE $\frac{1}{4}$ SW $\frac{1}{4}$ , Section 28, T6S R93W	1020 feet FNL, 240 feet FWL SW $\frac{1}{4}$ SW $\frac{1}{4}$ , Section 28, T6S R93W
Benjamin Federal 28-13B2 (K28NW)	COC52583 (BH)	1628 feet FSL, 2425 feet FWL NE $\frac{1}{4}$ SW $\frac{1}{4}$ , Section 28, T6S R93W	715 feet FSL, 240 feet FWL SW $\frac{1}{4}$ SW $\frac{1}{4}$ , Section 28, T6S R93W
Benjamin Federal 28-13C1 (K28NW)	COC52583 (BH)	1619 feet FSL, 2433 feet FWL NE $\frac{1}{4}$ SW $\frac{1}{4}$ , Section 28, T6S R93W	350 feet FSL, 240 feet FWL SW $\frac{1}{4}$ SW $\frac{1}{4}$ , Section 28, T6S R93W
Benjamin Federal 28-13C2 (K28NW)	COC52583 (BH)	1611 feet FSL, 2425 feet FWL NE $\frac{1}{4}$ SW $\frac{1}{4}$ , Section 28, T6S R93W	25 feet FSL, 240 feet FWL SW $\frac{1}{4}$ SW $\frac{1}{4}$ , Section 28, T6S R93W
Benjamin Federal 28-14B1 (K28NW)	COC54737 (BH)	1567 feet FSL, 2531 feet FWL NE $\frac{1}{4}$ SW $\frac{1}{4}$ , Section 28, T6S R93W	1060 feet FSL, 1950 feet FWL SE $\frac{1}{4}$ SW $\frac{1}{4}$ , Section 28, T6S R93W

Benjamin Federal 28-14B2 (K28NW)	COC54737 (BH)	1577 feet FSL, 2423 feet FWL NE¼SW¼, Section 28, T6S R93W	710 feet FSL, 1950 feet FWL SE¼SW¼, Section 28, T6S R93W
Benjamin Federal 28-14C (K28NW)	COC54737 (BH)	1585 feet FSL, 2432 feet FWL NE¼SW¼, Section 28, T6S R93W	390 feet FSL, 1950 feet FWL SE¼SW¼, Section 28, T6S R93W
Benjamin Federal 33-3B (K28NW)	COC54737 (BH)	1568 feet FSL, 2431 feet FWL NE¼SW¼, Section 28, T6S R93W	265 feet FNL, 1930 feet FWL NE¼NW¼, Section 33, T6S R93W
Benjamin Federal 33-4B (K28NW)	COC54737 (BH)	1594 feet FSL, 2424 feet FWL NE¼SW¼, Section 28, T6S R93W	240 feet FNL, 330 feet FWL NW¼NW¼, Section 33, T6S R93W

An initial fee well was drilled on this pad in 2002, followed in 2004 with another fee well and the Federal GMU28-14D well. The drilling of the Federal well in 2004 was specifically analyzed in EA#CO140-2004-069. The existing disturbed area of the pad is 5.0 acres. The K28NW pad would be reconstructed for the 20 additional wells, and the site would be expanded an additional 2.5 acres for a new total pad disturbance of 7.5 acres (Figure 3). For the purposes of this Section 390 Categorical Exclusion, the pad expansion results in a new disturbance of 2.5 acres.

The existing access road (BLM #8185) and pipeline would continue to serve the planned wells for the K28NW pad in their present condition. EnCana holds a right-of-way (ROW) on the existing road across public lands in Sections 20, 28, and 29 (T6S R93W) to access the K28NW pad and is required to adhere to the terms and conditions outlined in the ROW (#COC65904). The ROW does not include a big game timing limitation, since the road is open to the public and the nearby residence year-round.

Resource surveys including wildlife and cultural resources were completed relative to approval of the Application for Permit to Drill (APD) for the GMU28-14D in 2004. A raptor survey was conducted in the K28NW project area on October 13-14, 2010, with a result of no nests found.

An onsite for the project was conducted on October 14, 2010. Federal leases COC52583 and COC54737 (the bottomhole targets for the twelve Federal wells) are not directly applicable to the proposed action on the pad since the pad lies on private surface with underlying fee minerals.

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

**Name of Plan:** The current land use plan is the *Glenwood Springs Resource Management Plan* (RMP), approved in 1984 and revised in 1988 (BLM 1984). 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 1999b).

**Date Approved:** *Oil and Gas Plan Amendment to the Glenwood Springs Resource Management Plan* (BLM 1991) – approved 11/27/91 and *Oil & Gas Leasing & Development Record of Decision and Resource Management Plan Amendment* (BLM 1999b) – approved March 24, 1999.

**Decision Number/Page:** BLM 1991, page 3; BLM1999b, page 15

**Decision Language:** The 1991 Oil and Gas Plan Amendment (BLM 1991) included the following at page 3: “697,720 acres of BLM-administered mineral estate within the Glenwood Springs Resource Area 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 unchanged in the 1999 ROD

and RMP amendment at page 15 (BLM 1999b): “In areas being actively developed, the operator must submit a Geographic Area Proposal (GAP) [currently referred to as a Master Development Plan, MDP] that describes a minimum of 2 to 3 years of activity for operator controlled leases within a reasonable geographic area.” Furthermore, Appendices A and B (BLM 1999b) list Lease Stipulations (Appendix A) and Management of Lease Development (Appendix B) features which further support the initial decision language from 1991 Resource Management Plan Amendment.

**REVIEW OF EXISTING NEPA DOCUMENTS:**

The following NEPA document satisfies the criteria of being an activity-level or project-level EIS or EA that is applicable to the proposed action.

EA #CO140-2004-069) approved on June 21, 2004 specifically analyzed the reconstruction of the K28NW pad and its ancillary facilities and the drilling of the GMU28-14D Federal well.

**CATEGORICAL EXCLUSION REVIEW:** The proposed action is categorically excluded from further documentation in accordance with statutory NEPA categorical exclusions (CXs), as granted in Section 390 of the Energy Policy Act of 2005, for oil and gas exploration and development. The proposed action qualifies as a categorical exclusion under Section 390, based on the qualifying criterion Number 1, of the categories listed in the table below.

<b>Qualifying Criteria</b>	<b>YES</b>	<b>NO</b>
1. Individual surface disturbances of less than five (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.	X	
a. Will disturb less than 5 acres; if more than one action is proposed for a lease, each activity is counted separately, and each may disturb up to 5 acres.	X	
b. The current unreclaimed surface disturbance readily visible on the entire leasehold is not greater than 150 acres, including the proposed action.	X	
c. This categorical exclusion includes the requirement of a site-specific NEPA document. A site-specific NEPA analysis may be an EA/EIS for exploration and/or development, for a specific MDP, for a multi-well or a single well permit approval.	X	

Additionally, none of the extraordinary circumstances in the following table, taken from 516 DM 2, Appendix 2, applies.

<b>Extraordinary Circumstances</b>	<b>YES</b>	<b>NO</b>
1. Have significant adverse effects on public health and safety.		X
2. Have significant impacts on such natural resources and unique geographic characteristics as historic or cultural resources; park, recreation or refuge lands; wilderness areas; wild or scenic rivers; national natural landmarks; sole or principal drinking water aquifers; prime farmlands; wetlands (Executive Order 11990); floodplains (Executive Order 11988); national monuments; migratory birds; and other ecologically significant or critical areas.		X
3. Have highly controversial environmental effects or involve unresolved conflicts concerning alternative uses of available resources [NEPA Section 102(2)(E)].		X
4. Have highly uncertain and potentially significant environmental effects or involve unique or unknown environmental risks.		X
5. Establish a precedent for future action or represent a decision in principle about future actions with potentially significant environmental effects.		X
6. Have a direct relationship to other actions with individually insignificant but cumulatively significant environmental effects.		X

Extraordinary Circumstances	YES	NO
7. 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.		X
8. 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.		X
9. Violate a Federal law or a State, local, or tribal law or requirement imposed for the protection of the environment.		X
10. Have the potential for a disproportionately high and adverse effect on low income or minority populations (Executive Order 12898).		X
11. 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).		X
12. Contribute to the introduction, continued existence, or spread of noxious weeds 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).		X

INTERDISCIPLINARY REVIEW: The proposed action was presented to, and reviewed by the Colorado River Valley Field Office interdisciplinary team on October 14, 2010. A list of resource specialists who participated in this review is available upon request from the Colorado River Valley Field Office.

MITIGATION: Conditions of Approval that would be included in the APDs are attached.

NAME OF PREPARER: Jim Byers, Natural Resource Specialist

NAME OF ENVIRONMENTAL COORDINATOR: Allen Crockett, Supervisory NRS

DECISION AND RATIONAL: I have reviewed this CX and have decided to approve the proposed action.

This action is listed in the Instruction Memorandum Number 2005-247 and Instruction Memorandum Number 2010-118 as an action that may be categorically excluded under Section 390 of the Energy Policy Act of 2005. I have evaluated the action relative to the five qualifying criteria listed above and have determined that, as it does not represent an exception, it is therefore categorically excluded from further environmental analysis.

SIGNATURE OF AUTHORIZED OFFICIAL:   
Supervisory Natural Resource Specialist

DATE SIGNED: Dec 7, 2010

## Administrative Review or Appeal Opportunities

This decision is effective upon the date the decision or approval by the authorized officer. Under regulations addressed in 43 CFR Subpart 3165, any party adversely affected has the right to appeal this decision. An informal review of the technical or procedural aspects of the decision may be requested of this office before initiating a formal review request. You have the right to request a State Director review of this decision. You must request a State Director review prior to filing an appeal to the Interior Board of Land Appeals (IBLA) (43CFR 3165.4).

If you elect to request a State Director Review, the request must be received by the BLM Colorado State Office, 2850 Youngfield Street, Lakewood, Colorado 80215, no later than 20 business days after the date the decision was received or is considered to have been received. The request must include all supporting documentation unless a request is made for an extension of the filing of supporting documentation. For good cause, such extensions may be granted. You also have the right to appeal the decision issued by the State Director to the IBLA.

### Contact Person

For additional information concerning this decision, contact Jim Byers, Natural Resource Specialist, Colorado River Valley Field Office, 2300 River Frontage Road, Silt, Colorado 81652, 970-876-9056.

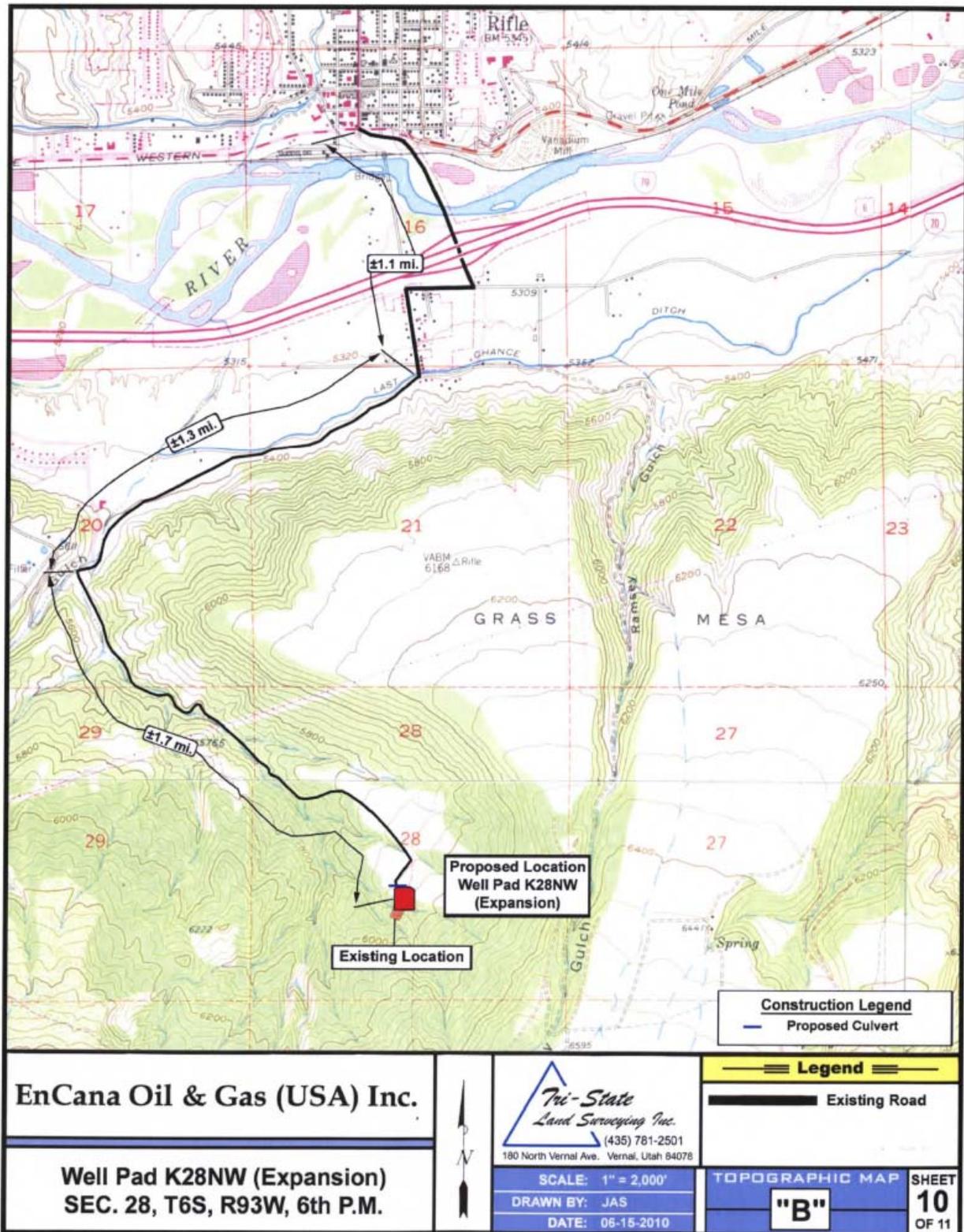


Figure 1. Project Location Map

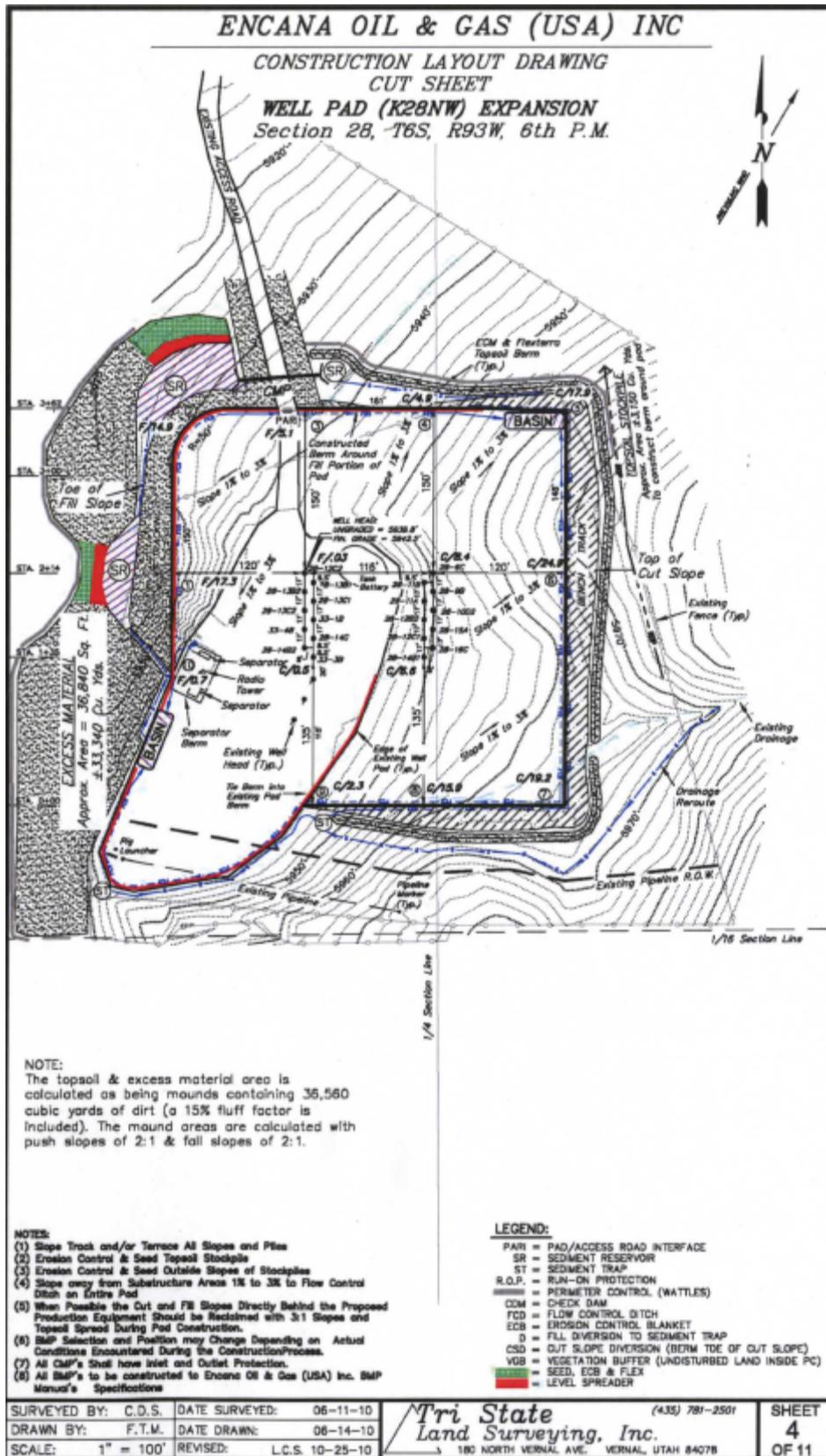


Figure 2. Construction Layout Plat Showing Storm Water Controls and Topsoil Windrowing

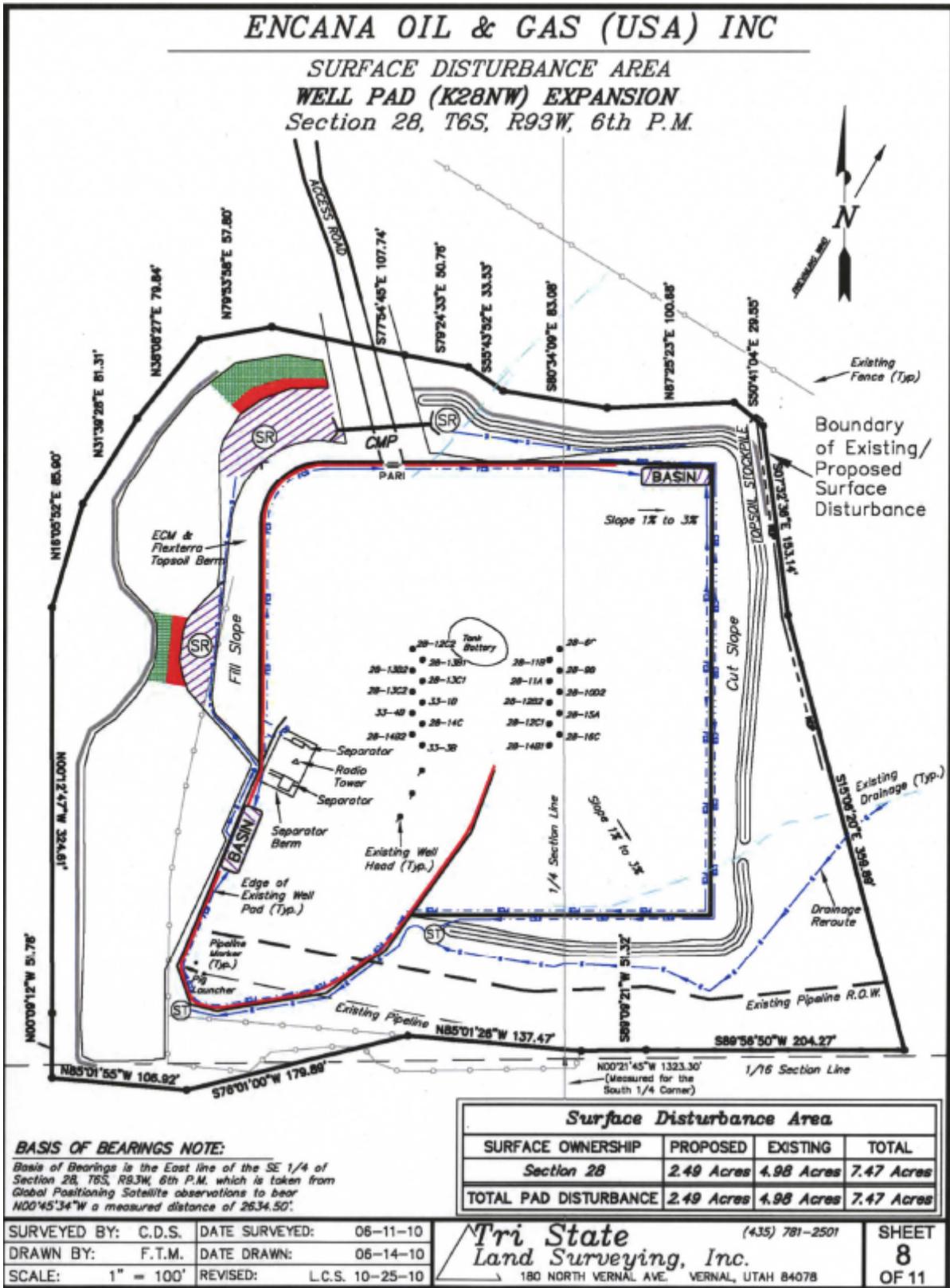


Figure 3. Surface Disturbance Plat

## **Surface Use Conditions of Approval DOI-BLM-CO-N040-2011-0004-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. Noise and Light Mitigation during the Drilling/Completion Work. Sheet 4 of TriState Land Surveying Plats for the K28NW pad shows the excess material stockpile along the west edge of the pad. The material stockpile shall be constructed along the west and northwest pad edges in a manner that serves as a barrier for noise and nighttime lighting impacts to the nearby residence.
3. Interim Reclamation Related to Drilling Phases. Within one year of completion of the initial ten (10) development wells in the first cellarhole configuration as shown on Sheet 4 or within one year of completion of all development wells on a pad (whichever the situation may be), the operator shall 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 development drilling, conducted in phases on a single pad, occurs 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.
4. Facility Paint Color. The paint color to be used on all surface facilities including pipeline risers and metal containment rings surrounding the launchers or receivers shall be the color of existing facilities – **Shale Green**.
5. 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.
6. 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 plats, 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. The BLM best management practice (BMP) for the Windrowing of Topsoil (COA #16) shall be implemented for well pad construction whenever topography allows.
- 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.
7. 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**.
8. 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).
9. Raptor Nesting. Raptor nest survey for the K28NW project was conducted in October 2010 and 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 associated with this project. Therefore, a Raptor Nesting Timing Limitation COA is not attached to this Categorical Exclusion. However, 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 activities 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.
10. 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>.

11. 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.
12. Range Management. Range improvements (fences, gates, reservoirs, pipelines, etc) shall be avoided during development of natural gas resources to the maximum extent possible. If range improvements are damaged during exploration and development, the operator will be responsible for repairing or replacing the damaged range improvements. If a new or improved access road bisects an existing livestock fence, steel frame gate(s) or a cattleguard with associated bypass gate shall be installed across the roadway to control grazing livestock.
13. 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 of the findings. The discovery must be protected until notified to proceed by the BLM.

Where feasible, the operator shall suspend ground-disturbing activities at the discovery site and immediately notify the BLM of any finds. The BLM 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.

14. 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 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 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 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. Approval to proceed will be based upon evaluation of the resource. Evaluation shall be by a qualified professional selected by the BLM 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 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 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 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 will provide technical and procedural guidelines for relocation and/or to conduct mitigation. Upon verification from the BLM 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).

15. 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 BLM.
16. 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.

17. Adherence to BLM Right-of-Way #COC65904. The operator shall abide by the Terms and Conditions of the referenced road right-of-way across public lands in Sections 20, 28 and 29 (T6S, R93W) including items related to regular road maintenance, dust control, weed control, road surfacing, seeding of cuts and fills, and the protection of the existing buried phone line serving the Benjamin residence.
18. Agreements with Other Holders. Potential impacts to the existing BLM road right-of-way (ROW) across Sections 20, 28 and 29 from the oil and gas development operations proposed by EnCana would be mitigated based on written maintenance and use agreements between EnCana, Laramie Energy II and Richard and Shirley Benjamin (all joint users of portions of the same BLM Road 8185). Such agreement(s) shall be obtained and verified with the BLM prior to any disturbance or construction across or adjacent to an existing right-of-way unless otherwise authorized.

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

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

**Surface Location:** NESW, Section 28, Township 6 South, Range 93 West, 6<sup>th</sup> P.M.

<u>Well Name</u>	<u>Well No.</u>	<u>Bottomhole Location</u>	<u>Lease</u>
Benjamin Fed.	28-12B2 (K28NW)	NWSW, Sec 28, T6S, R93W	COC52583
Benjamin Fed.	28-12C1 (K28NW)	NWSW, Sec 28, T6S, R93W	COC52583
Benjamin Fed.	28-12C2 (K28NW)	NWSW, Sec 28, T6S, R93W	COC52583
Benjamin Fed.	28-13B1 (K28NW)	SWSW, Sec 28, T6S, R93W	COC52583
Benjamin Fed.	28-13B2 (K28NW)	SWSW, Sec 28, T6S, R93W	COC52583
Benjamin Fed.	28-13C1 (K28NW)	SWSW, Sec 28, T6S, R93W	COC52583
Benjamin Fed.	28-13C2 (K28NW)	SWSW, Sec 28, T6S, R93W	COC52583
Benjamin Fed.	28-14B1 (K28NW)	SESW, Sec 28, T6S, R93W	COC54737
Benjamin Fed.	28-14B2 (K28NW)	SESW, Sec 28, T6S, R93W	COC54737
Benjamin Fed.	28-14C (K28NW)	SESW, Sec 28, T6S, R93W	COC54737
Benjamin Fed.	33-3B (K28NW)	NENW, Sec 33, T6S, R93W	COC54737
Benjamin Fed.	33-4B (K28NW)	NWNW, Sec 33, T6S, R93W	COC54737

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 CRVFO shall be notified. One of the following CRVFO inspectors shall be notified by phone: David Giboo at 970-876-9038, 970-319-2211 (cell), Todd Sieber at 970-876-9044, 970-319-7887 (cell), Alan White at 970-876-9037, 970-366-2565(cell), and Kenneth Moten 970-876-9043, 970-319-6930(cell).
2. 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. Please contact, Will Howell at 970-876-9049 (office) or 970-319-5837(cell) for verbal approvals. A secondary contact for verbal approvals is Dane Geyer at 970-876-9048 (office) or 970-589-6887 (cell).
3. If a well control issue arises during drilling or completions operations (e.g. kick, blowout, or water flow, casing failure occurs, or an increase in bradenhead pressure), Will Howell 970-876-9049 (office) or 970-319-5837 (cell) or Dane Geyer at 970-876-9048 (office) or 970-589-6887 (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/Dane Geyer; 2300 River Frontage Road, Silt, Colorado 81652 within 24 hours of a well control 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 function tested prior to drilling out the surface casing shoe. As a minimum, this equipment shall include a trip tank, pit volume totalizer, stroke counter, and flow sensor.

7. Prior to drilling out the surface casing shoe, gas-detecting equipment shall be installed in the mud return system, and the rate of penetration/mud shall be monitored for hydrocarbon gas/pore pressure changes.
8. A gas buster shall be functional and all flare lines effectively anchored in place, prior to drilling out the surface casing shoe. The discharge of the flare lines shall be a minimum of 100 feet 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. 1340-1540 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 casing is cemented, a Pressure Integrity 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 casing is set in a competent formation. Submit the results from the test via email ([william\\_howell@blm.gov](mailto:william_howell@blm.gov)) on the first well drilled on the pad and record results in the IADC log.
11. Prior to commencing fracturing operations, the production casing shall be tested to the maximum anticipated surface treating/fracture pressure (EnCana 7000 psi) and held for 15 minutes without a 2% leakoff. 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 within 48 hours after Frac operations.
12. 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/Dane Geyer, 2300 River Frontage Road, Silt, Colorado 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.

A greater volume of cement may be required to meet the 200-foot cement coverage requirement for the Williams Fork Fm./Mesaverde Group. Please evaluate the top of cement on the first cement job on the pad. If cement is below the 200-foot cement coverage requirement, adjust cement volume to compensate for low cement coverage.

A production casing centralizer program will maintain a 67% stand-off. The centralizer program will have 1 centralizer every other joint through the vertical section and 1 centralizer per joint through the tangent (build/drop) sections of the well.
13. 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 .pdf and .las format to CRVFO - Will Howell/Dane Geyer/Todd Sieber, 2300 River Frontage Road, Silt, Colorado 81652. Contact Todd Sieber at 970-876-9044 (office) or 970-319-7887 (cell) or [anthony\\_seiber@blm.gov](mailto:anthony_seiber@blm.gov) for clarification.

14. 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) Pressure Integrity Test results within 30 days of completed operations (i.e. landing tubing) per 43 CRF 3160-9. Contact Will Howell for clarification.
15. A casing string integrity test will be run insuring casing mechanical integrity on the surface/ production casing. This casing integrity test will not exceed 70% of the casing burst pressure per OOGO No. 2; Sec III, B. 1. h. The test pressure should not decline more than 10% in 30 minutes or remedial work will be necessary. Submit the graphical results from the test via email (william\_howell@blm.gov) or mail to CRVFO, 2300 River Frontage Road, Silt, Colorado 81652.
16. After the surface casing is cemented, a leak-off test 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 casing is set in a competent formation. Submit the graphical results from the test via email (william\_howell@blm.gov) or mail to CRVFO, 2300 River Frontage Road, Silt, CO 81652