

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. 2

NEPA LOG NUMBER: DOI-BLM-CO-N040-2015-0054-CX (390)

A. Background

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

CASEFILE/PROJECT NUMBER: Federal Lease COC24603

PROPOSED ACTION TITLE/TYPE: Proposal to Drill One Federal Well from the Existing GM 41-4 Pad Located on Private Land with underlying Private Minerals in the lower Riley Gulch Area near Parachute, Garfield County, Colorado. Authorized by Application for Permit to Drill (APD).

Proposed Federal Well: GM 704-32-9-HBM2

APPLICANT: WPX Energy Rocky Mountain LLC. Contact: Reed Haddock, 1001 17th St., Suite 1200, Denver, CO 80202.

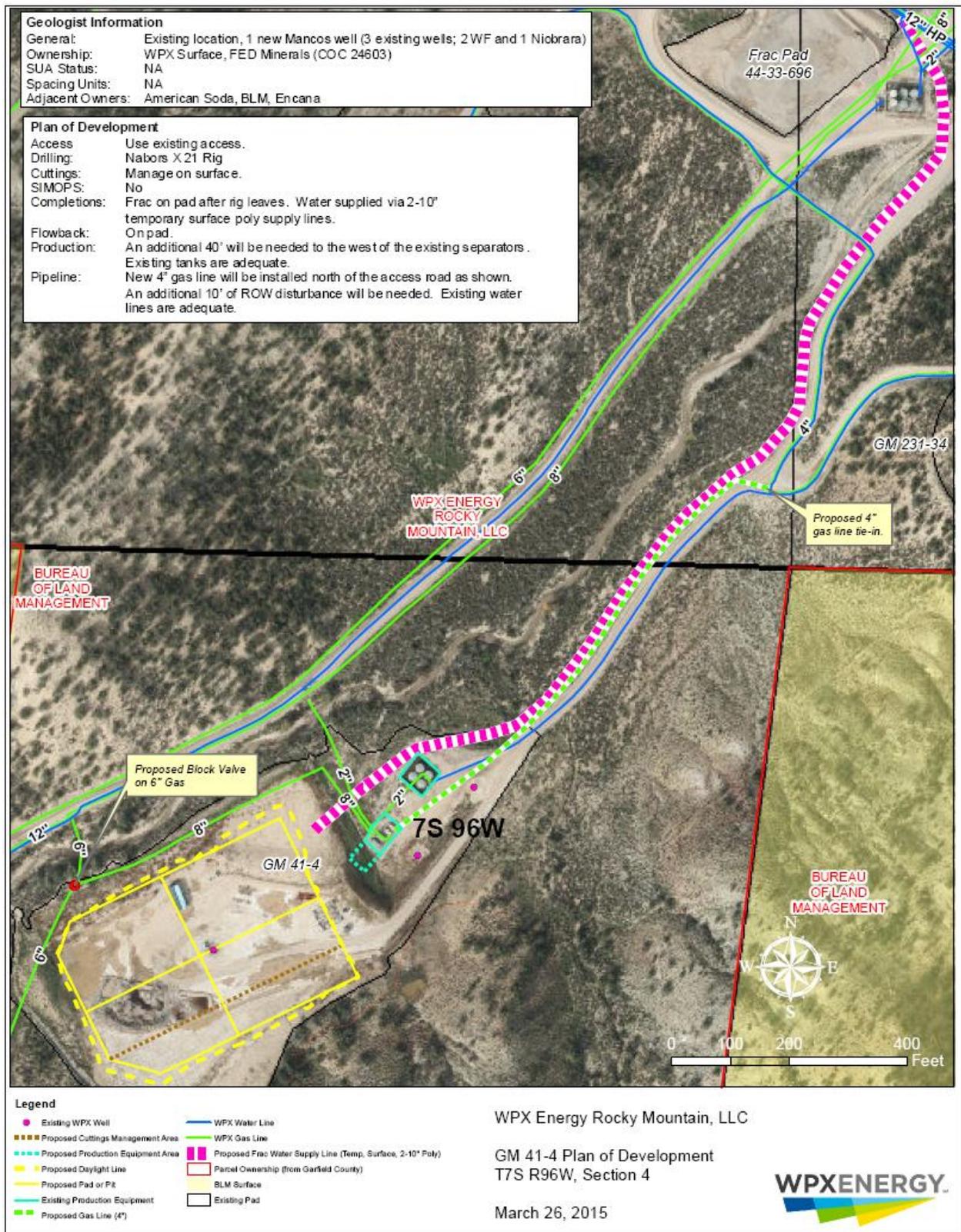
LOCATION OF THE PROPOSED ACTION: Township 7 South (T7S), Range 96 West (R96W), Section 4, Lot 1, Sixth Principal Meridian (Figure 1). The existing GM 41-4 pad is located approximately 4 miles northwest of Parachute, Garfield County, Colorado.

DESCRIPTION OF PROPOSED ACTION: The existing GM 41-4 well pad currently supports one Federal producing Niobrara well. The initial well, Williams GM 701-4-HN1, was spudded in August, 2012 and completed on December 14, 2012.

WPX proposes to further explore and develop the Niobrara formation with the drilling of second horizontal well on the GM 41-4 pad. No new surface disturbance is proposed; the reconstruction and use of the pad would redisturb 7.59 acres. All construction, drilling, and completion operations would occur entirely within the previously established surface disturbance footprint from the initial drilling visit. The maximum limits for the planned earthwork is a 9.8-foot cut at the southwest corner and 12.8-foot fill at the northwest pad corner (Figure 2). The GM 41-4 pad has been partially reclaimed and has served as the cuttings storage area for other nearby exploratory horizontal wells.

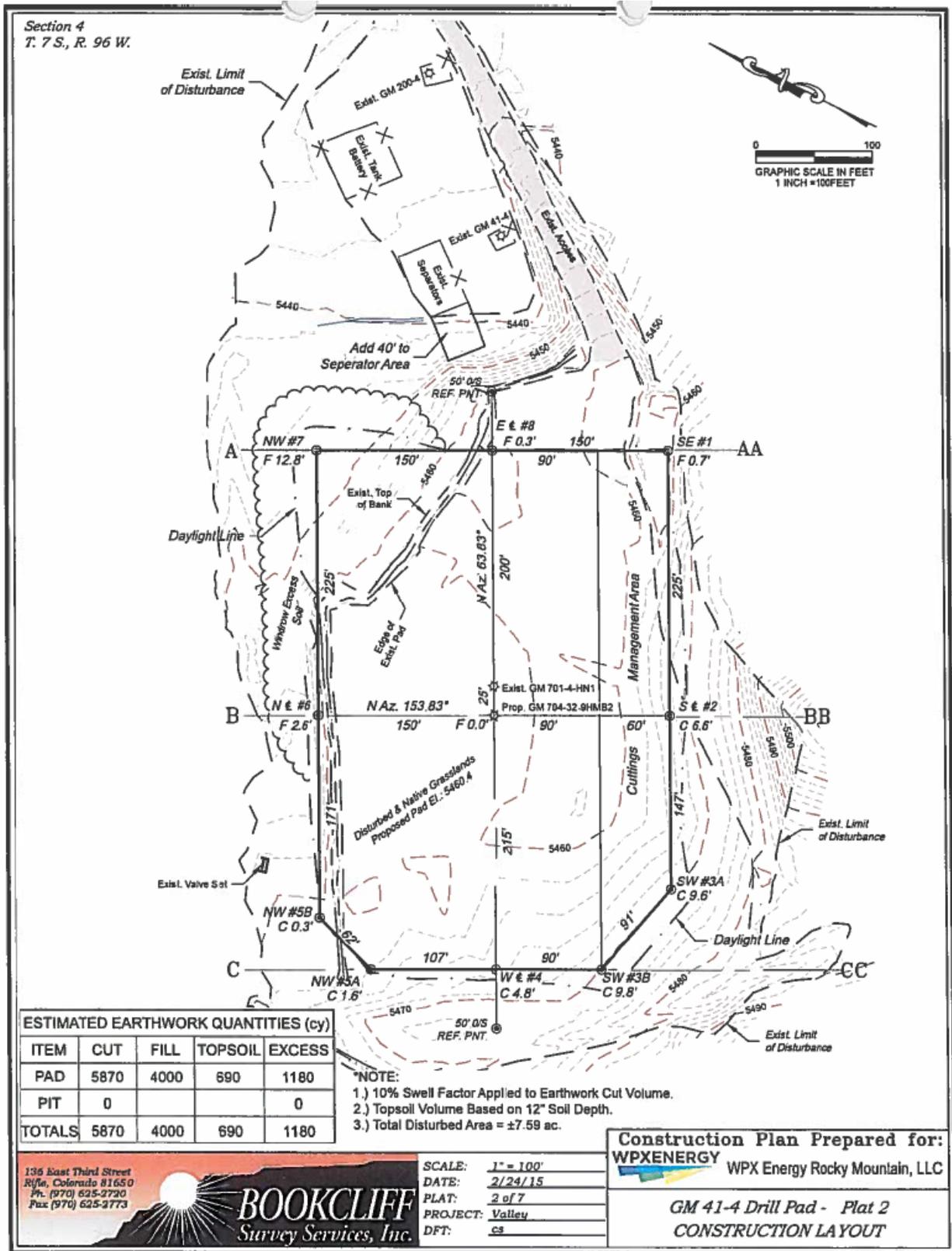
The existing access road and buried 4-inch diameter produced water line would adequately serve the additional well.

A new 4-inch diameter welded steel gas pipeline would be buried along the north side of the pad access road for approximately 890 feet to connect with the existing buried 4-inch gas line serving the GM 213-34 pad (Figure 1). The 4-inch gas line would gather the Williams Fork gas produced from the existing fee well operating on the original adjacent GM 41-4 pad. Ten feet of new disturbance would be needed along



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Figure 1. GM 41-4 Plan of Development.



the GM 41-4 road to install the 4-inch buried gas line segment. The Niobrara gas produced from the initial horizontal well and the new GM 704-32-9-HBM2 well would be gathered into an existing 8-inch buried line running north and west around the GM 41-4 pad. A new block valve would be installed in the existing 6-inch gas gathering line located near the northwest pad corner to funnel the Niobrara gas from the 8-inch line across Riley Gulch through the existing surface pipeline span and into the 12-inch sales line located parallel to the Riley Gulch Road (Figure 1). The new segment of buried 4-inch gas line and the block valve installation would create 0.20 acres of new disturbance.

To deliver water volumes supporting the well completion work for the horizontal well, two 10-inch inside diameter fused poly pipelines would be laid on the surface along 1,885 feet the pad access road to an existing water system connection point north and east of the existing Riley Tank Farm (Figure 1).

Total proposed disturbance for the project would be 7.79 acres. After interim reclamation, the pad would be reduced to a long-term size of 1.89 acres.

Resource surveys, including those for cultural resources, nesting raptors, weeds, and special status plants and animals, were completed in conjunction with original planning for the GM 41-4 pad. Marginally suitable habitat for the Federally threatened plant species, DeBeque phacelia, was identified within 20 to 100 meters from the edge of the pad and access road disturbance during botany surveys for the initial pad construction. Informal consultation with USFWS in 2012 resulted in a letter of concurrence. Habitat protections from this consultation are included as COAs, which would be attached to the APD. A followup raptor survey would be required in spring-summer 2015 prior to any construction startup. Since the existing pad and pipeline work would occur on private lands with underlying fee minerals, no Federal lease actions are applicable to the project implementation. Pertinent COAs to be attached to the APD are included herein.

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 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.”

The GM 41-4 pad was previously analyzed in the Environmental Assessment (EA) DOI-BLM-CO-N040-2012-0061EA, signed June 18, 2012.

The Proposed Action is in conformance with the 1991 and 1999 RMP amendments cited above because the Federal mineral estate proposed for development is open to oil and gas leasing and development, and Federal oil and gas leases COC25603 were duly leased pursuant thereto. The current project meets GAP exception criteria in the 1999 RMP Amendments based on its relatively small size, use of the existing pad, and its location along existing access roads and pipeline corridors. Therefore, the Proposed Action is in conformance with the current land use plan.

C. Compliance with NEPA

Consistency with CX Category #2 (Table 1): “Drilling an oil and gas location or well pad at a site at which drilling has occurred within five (5) years prior to the date of spudding the well.”

Table1. Project Screening Questions		
1. Does the proposed drilling take place at an existing location and/or well pad site?	<u>Yes</u>	No
2. Has drilling occurred at the existing location and/or well pad site within 5 years prior to the date of spudding the proposed well?	<u>Yes</u>	No

Persons and/or Agencies Consulted: WPX: Mike Shoemaker, Kent Rider, Mike Reynolds, Doug McAdam, Wally Hammer, Porter Cooley, Todd Jacobs, Traci Van Loan, Tyler Ross, Wayne Gallahan.

Interdisciplinary Review: The BLM staff from the CRVFO listed in Table 2 participated in the preparation of this Section 390 CX, including review of resource 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.

The Proposed Action was presented to the Colorado River Valley Field Office interdisciplinary team on March 24, 2015.

Table 2. BLM Interdisciplinary Team Authors and Reviewers		
<i>Name</i>	<i>Title</i>	<i>Areas of Participation</i>
John Brogan	Archaeologist	Cultural Resources, Native American Religious Concerns
Jim Byers	Natural Resource Specialist	Project Lead, Access & Transportation, Socioeconomics, Wastes-Hazardous or Solid, Air Quality, Noise, Soils, Surface Waters, Waters of the U.S.
Vanessa Caranese	Geologist	Geology and Minerals, Groundwater, Paleontology
Allen Crockett, Ph.D., J.D.	Supervisory NRS	NEPA Review
Bob Hartman	Petroleum Engineer	Downhole COAs
Judy Perkins, Ph.D.	Botanist	Invasive Non-native Species, Special-status Species (Plants), Vegetation
Sylvia Ringer	Wildlife Biologist	Migratory Birds, Special-status Species (Animals), Wildlife, Aquatic and Terrestrial

MITIGATION: Conditions of Approval (COAs) to be attached to the Application for Permit to Drill for the Federal well on the GM 41-4 pad are listed in the attachment to this Section 390 CX.

Name of Preparer: Jim Byers, Natural Resource Specialist

Date Prepared: 3/24/15

D. Implementation Date

The following is a COA for this project:

“If the proposed well has not been spudded by **December 14, 2017**, this APD will expire and the operator shall cease all operations related to preparing to drill this well.”

E. Signature

The Proposed Action is categorically excluded from further NEPA documentation in accordance with Section 390 (b)(2) of the Energy Policy Act of 2005, which provides for exclusion of:

Drilling an oil or gas well at a location or well pad site at which drilling has occurred previously within 5 years prior to the date of spudding the well.

Authorizing Official: Allen B. Crockett Date: 4/15/15

F. Decision and Rationale for Action

I have decided to approve the drilling of the one Federal well on the existing GM 41-4 pad with the stipulations and conditions of approval identified in the attachment 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
Allen B. Crockett, Ph.D.
Supervisory Natural Resource Specialist

4/15/15
Date

G. 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 an 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
WPX Energy Rocky Mountain LLC
Drilling One Federal Well on the Existing GM 41-4 Well Pad
DOI-BLM-CO-N040-0054-CX (390)

GENERAL CONDITIONS OF APPROVAL

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. No construction activities shall commence without staking of pad construction limits, pad corners, and road/pipeline centerlines and disturbance corridors.
2. **Implementation Date.** If the proposed well has not been spudded by **December 14, 2017**, this Application for Permit to Drill will expire and the operator shall cease all operations related to preparing to drill the well.
3. **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.
4. **Drill Cuttings Management.** Cuttings generated from the well bores shall be worked through a shaker system on the drill rig, and mixed with a drying agent, if necessary. If water-based cuttings are retained on the pad, they shall be deposited in a BLM approved cuttings trench or cuttings management area for later burial during interim reclamation earth work. The water-based cuttings shall be remediated per COGCC regulations (Table 910-1 standards) prior to earthwork reshaping related to well pad interim reclamation.

Management of Synthetic-Based Drilling Mud

The use of synthetic-based drilling mud (SBM) to drill the curve and lateral portions of the wellbore (after the setting and cementing of the intermediate casing) of the Niobrara well shall be conducted consistent with the protocols outlined in the APD's Drilling Plan (#5. Mud Program), the APD's Surface Use Plan of Operations (#7, Methods for Handling Waste Disposal) and these COAs.

Care shall be taken to keep the cuttings area as tidy as possible to avoid ground contamination from the SBM use – the centrifuge outlets shall be closed off during the switching out of cuttings boxes. When the cuttings box is filled to capacity, with a contingency for safe hauling on roads and highways, the SBM cuttings will be a) hauled directly to Greenleaf in DeBeque, Colorado with a manifest for disposal or (b) staged on the drilling pad for later haul to Greenleaf with appropriate record keeping. Roll-off steel boxes with gasket-lined covers shall be used to haul the SBM cuttings to the disposal facility. Should an alternate hauling method or an alternate site (other than the drilling pad) be used to stage haul boxes filled with cuttings, WPX shall notify BLM Natural Resource Specialist (Jim Byers) via email or phone call prior to use.

Cuttings shall be tested periodically during the drilling process for the constituents and contamination levels addressed in the COGCC Table 910-1 and testing results shall be submitted

to BLM for review upon request. All cuttings that fail to satisfy the contamination levels identified in COGCC's Table 910-1 shall be hauled to and disposed at the Greenleaf facility identified in the sundry.

Synthetic-Based Mud (SBM) Operations

The drilling system shall be equipped with appropriate drip pans, liners, and catchments under reasonably anticipated leak sources as needed to prevent the SBM and cuttings from the contaminating ground surface of the drill pad.

All spills in excess of one barrel outside the containment devices shall be reported to the BLM within 24 hours. A spill kit specific to SBM use shall be staged on the drilling location or within a short distance (less than a 10 minute drive) of the drilling location.

Post Use Assessment Review

WPX and representatives shall participate in a post-assessment meeting with the BLM to discuss and review the drilling process for the Niobrara well. The meeting will focus on information sharing, remedies for problems, approaches for future use, etc. If the situation warrants during the drilling process, WPX may request, and the BLM may require, a meeting to jointly discuss methods to remedy unforeseen circumstances or events related to the use of SBM.

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. **Air Emissions.** Pursuant to BLM Instruction Memorandum No. CO-2015-009 issued on February 9, 2015, the operator shall either voluntarily submit an emissions inventory to the BLM using the online Emissions Tool or provide the necessary data for the BLM to complete an emissions inventory. The BLM may direct the operator to implement appropriate mitigation measure(s) if the emissions inventory results indicate a threshold exceedance of any single criteria pollutant (PM₁₀, PM_{2.5}, CO, NO_x, SO_x). **NOTE: If the operator chooses to enter emissions inventory data directly into the BLM worksheet, the operator shall await notification from the BLM that worksheet revisions currently underway by the BLM Colorado State Office have been completed and are in place (estimated timeframe April 2015).**
7. **Drainage Crossings and Culverts.** Construction activities at perennial, intermittent, and ephemeral drainage crossings (e.g., burying pipelines, installing culverts) shall be timed to avoid high flow conditions. Construction that disturbs any flowing stream shall utilize either a piped stream diversion or a cofferdam and pump to divert flow around the disturbed area.

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 24 inches. 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 (USACE) recommends designing drainage crossings for the 100-year event. Contact the USACE Colorado West Regulatory Branch at 970-243-1199 ext. 17.

Pipelines installed beneath stream crossings shall be buried at a minimum depth of 4 feet below the channel substrate to avoid exposure by channel scour and degradation. Following burial, the channel grade and substrate composition shall be returned to pre-construction conditions.

8. Jurisdictional Waters of the U.S. The operator shall obtain appropriate permits from the U.S. Army Corps of Engineers (USACE) prior to discharging fill material into Waters of the U.S. in accordance with Section 404 of the Clean Water Act. Waters of the U.S. are defined in 33 CFR Section 328.3 and may include wetlands as well as perennial, intermittent, and ephemeral streams. Permanent impacts to Waters of the U.S. may require mitigation. Contact the USACE Colorado West Regulatory Branch at 970-243-1199 ext. 17.
9. 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 reclamation are described below.
 - a. Reclamation Plans. In areas that have low reclamation potential, 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, the 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 the 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. The 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 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.

If directed by the BLM, the operator shall implement measures following seedbed preparation (when broadcast seeding or hydroseeding is to be used) to create small depressions to enhance capture of moisture and establishment of seeded species. Depressions shall be no deeper than 1 to 2 inches and shall not result in piles or mounds of displaced soil. Excavated depressions shall not be used unless approved by the BLM for the purpose of erosion control on slopes. Where excavated depressions are approved by the BLM, the excavated soil shall be placed only on the downslope side of the depression.

If directed by the BLM, the operator shall conduct soil testing prior to reseeding to identify if and what type of soil amendments may be required to enhance revegetation success. At a minimum, the soil tests shall include texture, pH, organic matter, sodium adsorption ratio (SAR), cation exchange capacity (CEC), alkalinity/salinity, and basic nutrients (nitrogen, phosphorus, potassium [NPK]). Depending on the outcome of the soil testing, the BLM may require the operator to submit a plan for soil amendment. Any requests to use soil amendments not directed by the BLM shall be submitted to the CRVFO for approval.

- e. Seed Mixes. A seed mix consistent with BLM standards in terms of species and seeding rate for the Pinyon-Juniper Woodland and/or Mountain/Wyoming Big Sagebrush Shrubland habitat type shall be used on all BLM lands affected by the project (see Attachment 1 of the letter provided to operators dated October 24, 2014).

For private surfaces the operator shall use a BLM-approved native seed mix unless specified otherwise by the private landowner.

The seed shall contain no prohibited or restricted noxious 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 the 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.

An exception to these seeding requirements shall be made for seeding of sagebrush. Sagebrush seeding shall occur prior to winter snowfall, or on top of snow. Sagebrush may be sown either by broadcast seeding, or, if not on snowpack, by placing the seed in the fluffy seed box of a seed drill, with the drop tube left open to allow seed to fall out on the ground surface.

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 in project areas within pinyon-juniper, sagebrush shrubland, and/or salt desert shrub habitat types. Mulch may consist of either hydromulch or of certified weed-free straw or certified weed-free native grass hay crimped into the soil. Mulch shall not be used within mountain shrub or spruce-fir forest habitat types, unless requested or approved by the BLM.

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 BMPs approved by the BLM. Additional BMPs, such as biodegradable wattles, weed-free straw bales, or silt fences, shall be employed as necessary to reduce transport of sediment into drainages. The BLM may require the use of hydromulch or biodegradable blankets/ matting to ensure adequate protection from slope erosion and offsite transport of sediment and to improve reclamation success.
- 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, including a description of the monitoring methods used, 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.

10. 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 and Pesticide Application Records (PARs), including GPS data in accordance with the February 27, 2014 letter to operators, shall be submitted to BLM by **December 1**.
11. 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, shall be coordinated with the BLM project lead and BLM wildlife biologist and the USFWS representative to the BLM Field Office (970-876-9051).
12. 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 1 to June 1**. 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).

If project-related activities are initiated within the specified buffer distance of any active nest, even if outside the 60-day TL period specified in this COA, the operator remains responsible for compliance with the MBTA with respect to a “take” of birds or of active nests (those containing eggs or young), including nest failure caused by human activity (see COA for Migratory Birds).

13. Migratory Birds – Birds of Conservation Concern. Pursuant to BLM Instruction Memorandum 2008-050, all vegetation removal or surface disturbance in previously undisturbed lands providing potential nesting habitat for Birds of Conservation Concern (BCC) is prohibited from **May 15 to July 15**. An exception to this TL may 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.

14. Migratory Birds – General. 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, which includes injury and direct mortality resulting from human actions not intended to have such result. To minimize the potential for the take of a migratory bird, the operator shall take reasonable steps to prevent use by birds of fluid-containing pits associated with oil or gas operations, including but not limited to reserve pits, produced-water pits, hydraulic fracturing flowback pits, evaporation pits, and cuttings trenches. Liquids in these pits—whether placed or accumulating from precipitation—may pose a risk to birds as a result of ingestion, absorption through the skin, or interference with buoyancy and temperature regulation.

Based on low effectiveness of brightly colored flagging or spheres suspended over a pit, the operator shall install netting with a mesh size of 1 to 1.5 inches, and suspended at least 4 feet above the fluid surface, on all pits into which fluids are placed, except for storage of fresh water in a pit that contains no other material. The netting shall be installed within 24 hours of placement of fluids into a pit. The requirement for netting does not apply to pits during periods of continuous, intensive human activity at the pad, such as drilling and hydraulic fracturing phases or, as pertains to cuttings trenches, during periods of active manipulation for cuttings management, remediation of contaminated materials, or other purposes.

15. 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 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 would, 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.

16. 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 would be subject to prosecution.

If subsurface cultural values are uncovered during operations, all work in the vicinity of the resource will cease and the Authorized Officer with the BLM notified immediately. The operator shall take any additional measures requested by the BLM to protect discoveries until they can be adequately evaluated by the permitted archaeologist. Within 48 hours of the discovery, the SHPO and consulting parties will be notified of the discovery and consultation will begin to determine an appropriate mitigation measure. BLM in cooperation with the operator will ensure that the discovery is protected from further disturbance until mitigation is completed. Operations may resume at the discovery site upon receipt of written instructions and authorization by the authorized officer.

Pursuant to 43 CFR 10.4(g), the holder must notify the authorized officer, by telephone, with written confirmation, immediately upon the discovery of human remains, funerary items, sacred objects, or objects of cultural patrimony on Federal land. Further, pursuant to 43 CFR 10.4 (c) and (d), the holder must stop activities in the vicinity of the discovery that could adversely affect the discovery.

The holder shall make a reasonable effort to protect the human remains, funerary items, sacred objects, or objects of cultural patrimony for a period of thirty days after written notice is provided to the authorized officer, or until the authorized officer has issued a written notice to proceed, whichever occurs first.

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).

17. 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 shall stabilize the disturbed area by recontouring, mulching, providing run-off and erosion control, replacing topsoil as directed, seeding with BLM-prescribed native seed mixes (or landowner-requested seed mix on a Fee surface), and conducting weed control, as necessary. In cases where the exploratory drilling and development drilling 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 the BLM or requested by the private landowner shall be applied to stabilize the soil between visits per direction of the BLM.
19. 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 from the Colorado River Valley 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.
19. Range Management. Range improvements (fences, gates, reservoirs, pipelines, etc.) shall be avoided during development of oil and 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, a steel frame gate(s) or a cattleguard with associated bypass gate shall be installed across the roadway to control grazing livestock.
20. Visual Resources. Production facilities shall be placed to avoid or minimize visibility from travel corridors, residential areas, and other sensitive observation points—unless directed otherwise by the BLM due to other resource concerns—and shall be placed to maximize reshaping of cut-and-fill slopes and interim reclamation of the pad.

All above-ground facilities shall be painted **Shadow Gray** to minimize contrast with adjacent vegetation or rock outcrops.

PROJECT-SPECIFIC CONDITIONS OF APPROVAL

- A. **Measures to Protect DeBeque Phacelia Habitat.** The Operator shall incorporate the following steps to avoid and minimize impacts to DeBeque phacelia:
- a) **Buffer Protection.** No new surface disturbing activities shall occur within 20 meters of the edge of delineated potential habitat. A temporary fence shall be installed along the edge of this buffer to prevent vehicle and pedestrian traffic across the potential habitat and its buffer.
 - b) **Dust Prevention.** Surface disturbing activities located between 20 meters and 100 meters of delineated potential habitats shall have dust control measures implemented.
 - c) **Weed Control.** A Pesticide Use Permit (PUP), specific to areas within 100 meters of DeBeque phacelia potential habitat, shall be obtained from the BLM prior to any herbicide treatment of noxious weeds within this buffer area. Treatments within this 100 meter buffer shall be limited to spot spraying or wicking. No broadcast spraying is permitted. A botanist approved by the BLM Botanist/Ecologist shall be on-site during any pesticide application within this 100 meter buffer.
- B. **Pipeline Installation Details.** A new 4-inch diameter welded steel gas pipeline shall be buried along the north side of the pad access road for approximately 890 feet to connect with the existing buried 4-inch gas line serving the GM 213-34 pad. The 4-inch gas line shall gather the Williams Fork gas produced from the existing fee well operating on the original adjacent GM 41-4 pad. Ten feet of new disturbance shall be needed along the GM 41-4 road to install the 4-inch buried gas line segment. The Niobrara gas produced from the initial horizontal well and the new GM 704-32-9-HBM2 well shall be gathered into an existing 8-inch buried line running north and west around the GM 41-4 pad. A new block valve shall be installed in the existing 6-inch gas gathering line located near the northwest pad corner to funnel the Niobrara gas from the 8-inch line across Riley Gulch through the existing surface pipeline span and into the 12-inch sales line located parallel to the Riley Gulch Road.

To deliver water volumes supporting the well completion work for the horizontal well, two 10-inch inside diameter fused poly pipelines shall be laid on the surface for a length of 1,885 feet along the pad access road to an existing water system connection point north and east of the existing Riley Tank Farm.

BUREAU OF LAND MANAGEMENT

Colorado River Valley Field Office
2300 River Frontage Road
Silt, CO 81652

DOWNHOLE CONDITIONS OF APPROVAL Applications for Permit to Drill

Operator: WPX Energy Rocky Mountain LLC
Lease Number: COC24603
Well: GM 704-32-9-HMB2 Mancos Completions
Engineer: Stephen Garcia
Surface Location: Garfield County; Lot 1, Sec. 4, T7S, R96W

1. Twenty-four hours *prior* to (a) spudding, (b) conducting BOPE tests, (c) cementing/running casing strings, and (d) within 24 hours *after* spudding, the CRVFO shall be notified. One of the following CRVFO inspectors shall be notified by phone. The contact number for all notifications is: 970-876-9064. The BLM CRVFO inspectors are David Giboo, PET; Greg Rios, PET; Tim Barrett, PET; Alex Provstgaard, PET; Brandon Jamison, PET; Ed Fancher, PET.
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. Contact the petroleum engineer for verbal approvals (contact information below).
3. If a well control issue or failed test (e.g. kick, blowout, water flow, casing failure, or a bradenhead pressure increase) arises during drilling or completions operations, the petroleum engineer shall be notified within 24 hours from the time of the event. IADC/Driller's Logs and Pason Logs (mud logs) shall be forwarded to CRVFO – Petroleum Engineer, 2300 River Frontage Road, Silt, CO 81652 within 24 hours of a well control event.
4. The BOPE shall be tested and conform to Onshore Order No. 2 for a **10M** system and recorded in the IADC/Driller's log.
5. Flexible choke lines shall meet or exceed the API SPEC 16C requirements. Flexible choke lines shall have flanged connections and configured to the manufacturer's specifications. The flexible choke lines shall be anchored in a safe and workmanlike manner. At minimum, all connections shall be effectively anchored in place for safety of the personal on location. 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, deformations, and as straight/short as possible.
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 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. The mud system shall be monitored for hydrocarbon gas/pore pressure changes, rate

of penetration, and fluid loss.

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 wellhead 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. After the surface/intermediate casing is cemented, a Pressure Integrity Test/Mud Equivalency Test/FIT shall be performed on the first well drilled in accordance with OOGO No. 2; Sec. III, B.1.i. to ensure that 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 highest anticipated mud weight equivalent necessary to control the formation pressure to the next casing shoe depth or TD. Submit the results from the test via email to the petroleum engineer on the first well drilled on the pad or any horizontal well and record results in the IADC log. A failed pressure integrity test is more than 10% pressure bleed off in 15 minutes. Report failed test to the petroleum engineer.
10. 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 shall be submitted to CRVFO – Petroleum Engineer, 2300 River Frontage Road, Silt, CO 81652 within 48 hours. If the TOC is lower than required or the cement sheath of poor quality, a CRVFO petroleum engineer shall be notified for remedial operations within 48 hours from running the CBL and prior to commencing fracturing operations.

A greater volume of cement may be required to meet the 200-foot cement coverage requirement for the Williams Fork Formation /Mesaverde Group. Evaluate the top of cement on the first cement job on the pad (Temperature Log). If cement is below 200-foot cement coverage requirement, adjust cement volume to compensate for low TOC/cement coverage.
11. 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 – Petroleum Engineer, 2300 River Frontage Road, Silt, CO 81652. Contact 970-876-9000 for clarification.
12. 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 (a).
13. 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 10% leak-off. If leak-off is found, the petroleum engineer 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.

14. During hydraulic frac operations, monitor the bradenhead/casing head pressures throughout the frac job. Frac operations shall be terminated upon any sharp rise in annular pressure (+/- 40 psi or greater) in order to determine well/wellbore integrity. Notify the petroleum engineer immediately.

Contact Information

Colorado River Valley Field Office
Petroleum Engineer

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Petroleum Engineer

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