U.S. Department of the Interior
Bureau of Land Management
White River Field Office
220 E Market St
Meeker, CO 81641

ENVIRONMENTAL ASSESSMENT

NUMBER: DOI-BLM-CO-N05-2014-0075-EA

CASEFILE/PROJECT NUMBER: COC-60842
COC-76577 (Bargath natural gas pipeline ROW)
COC-76577-01 (Bargath Temporary Use Permit)

PROJECT NAME: WPX's proposed BCU 31-25-199 well pad and associated wells (2) in the Barcus Creek watershed

LEGAL DESCRIPTION: T. 1 N., R. 99 W., Sec. 25, 6th Principle Meridian

APPLICANT: WPX Energy Rocky Mountain, LLC.

PURPOSE & NEED FOR THE ACTION: The purpose of the action is to allow the development of Federal leases on BLM surface through the drilling of the proposed well and associated actions. The need for the action is established by the BLM's responsibility under the authority of the Mineral Leasing Act of 1920 as amended by the Federal Land Policy and Management Act of 1976 (FLPMA) to respond to the request to develop the Federal leases.

Decision to be Made: The Bureau of Land Management (BLM) will decide whether or not to approve the Applications for Permit to Drill (APDs) and associated infrastructure, and if so, under what conditions.

SCOPING, PUBLIC INVOLVEMENT, AND ISSUES:

Scoping: Scoping is the primary mechanism used by the BLM to initially identify issues. Internal scoping was initiated when the project was presented to the White River Field Office (WRFO) interdisciplinary team on May 20, 2014. External scoping was conducted by posting this project on the WRFO's on-line National Environmental Policy Act (NEPA) register on May 20, 2014, and the APD was posted on May 7, 2014.

Issues:
- How may the proposed action affect air quality?
- How may the proposed action affect area geology and minerals?
- How may the proposed action affect soil resources?
- How may the proposed action affect surface and ground water quality?

- How may the proposed action affect vegetation?
- How may the proposed action affect invasive, non-native species?
- How may the proposed action affect special status animal species?
- How may the proposed action affect special status plant species?
- How may the proposed action affect migratory birds?
- How may the proposed action affect terrestrial wildlife?
- How may the proposed action affect wild horses?
- How may the proposed action affect paleontological resources?
- How may the proposed action affect visual resources?
- How may the proposed action contribute hazardous or solid wastes?
- How may the proposed action affect existing or future fire management?
- How may the proposed action affect rangeland management?
- How may the proposed action affect floodplains, hydrology, and water rights?
- How may the proposed action affect area recreation?
- How may the proposed action affect nearby realty authorizations?
- How may the proposed action affect area access and transportation?

DESCRIPTION OF PROPOSED ACTION AND ALTERNATIVES:

Proposed Action: WPX Energy has requested authorization to construct the BCU 31-25-199 well pad and drill two natural gas wells (BCU 31-25-199 and BCU 432-25-199) (Figure 1). The applicant also requests authorization to install approximately 5,600 feet of gathering lines (both gas and water) and 1,000 feet of access road to access the location. The tentative construction date for the well pad would be upon approval. If approved and implemented, this action would result in approximately 15 acres of surface disturbance (Table 1).

Table 1. Proposed surface disturbance estimates for WPX's BCU 31-25-199 well pad.

Disturbance Feature	Dimensions (L x W, feet)	Acres (working surface)	Acres (disturbance footprint)
Well Pad	450 x 350	3.6	6.6
Access Road	1,000 x 30	0.69	0.69
Pipeline (8 inch)	5,600 x 60	7.7	7.7
Total			15.0

The proposed well pad has been engineered to accommodate approximately 22 natural gas wells.

Design Features: See Appendix A

No Action Alternative: Under the No Action Alternative, the proposed well pad and associated road and pipeline infrastructure would not be constructed, and the proposed natural gas wells would not be drilled.

ALTERNATIVES CONSIDERED BUT NOT CARRIED FORWARD: None.

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

Name of Plan: White River Record of Decision and Approved Resource Management Plan (White River ROD/RMP).

Date Approved: July 1, 1997

Decision Number/Page: Page 2-5

Decision Language: "Make federal oil and gas resources available for leasing and development in a manner that provides reasonable protection for other resource values."

AFFECTED ENVIRONMENT & ENVIRONMENTAL CONSEQUENCES

Standards for Public Land Health: In January 1997, the Colorado BLM approved the Standards for Public Land Health. These standards cover upland soils, riparian systems, plant and animal communities, special status species, and water quality. Standards describe conditions needed to sustain public land health and relate to all uses of the public lands. Because a standard exists for these five categories, a finding must be made for each of them in an environmental analysis (EA). These findings are located in specific elements listed below.

Cumulative Effects Analysis Assumptions: Cumulative effects are defined in the Council on Environmental Quality (CEQ) regulations (40 CFR 1508.7) as "...the impact on the environment that results from the incremental impact of the action when added to other past, present, and reasonably foreseeable actions regardless of what agency (Federal or non-Federal) or person undertakes such other actions." Table 2 lists the past, present, and reasonably foreseeable future actions within the area that might be affected by the Proposed Action; for this project, the area considered was the Natural Resources Conservation Service (NRCS) 5th Level Watershed. However, the geographic scope used for analysis may vary for each cumulative effects issue and is described in the Affected Environment section for each resource.

Estimates of surface disturbance within the lease (COC1491 at the surface location) that are most likely attributed to oil and gas activities equal approximately 23 acres. This area represents 4 percent of the total area of the lease, which is approximately 600 acres in size.

Producing well density in the project area equals less than one producing well per square mile, while road density in the project area equals approximately three miles of road per square mile.

Table 2. Past, Present, and Reasonably Foreseeable Actions

Action Description	STATUS		
	Past	Present	Future
Livestock Grazing	X	X	X
Wild Horse Gathers	X	X	X

Action Description	STATUS		
	Past	Present	Future
Recreation	X	X	X
Invasive Weed Inventory and Treatments	X	X	X
Range Improvement Projects : Water Developments Fences & Cattleguards	X	X	X
Wind Energy Met Towers	X	X	X
Oil and Gas Development: Well Pads Access Roads Pipelines Gas Plants Facilities	X	X	X
Power Lines	X	X	X
Oil Shale	X	X	X
Seismic	X	X	X
Vegetation Treatments	X	X	X

Affected Resources: The CEQ Regulations state that NEPA documents "must concentrate on the issues that are truly significant to the action in question, rather than amassing needless detail" (40 CFR 1500.1(b)). While many issues may arise during scoping, not all of the issues raised warrant analysis in an environmental assessment (EA). Issues will be analyzed if: 1) an analysis of the issue is necessary to make a reasoned choice between alternatives, or 2) if the issue is associated with a significant direct, indirect, or cumulative impact, or where analysis is necessary to determine the significance of the impacts. Table 3 lists the resources considered and the determination as to whether they require additional analysis.

Table 3. Resources and Determination of Need for Further Analysis

Determination[1]	Resource	Rationale for Determination
Physical Resources		
PI	Air Quality	See discussion below.
PI	Geology and Minerals	See discussion below.
PI	Soil Resources*	See discussion below.
PI	Surface and Ground Water Quality*	See discussion below.
Biological Resources		
NI	Wetlands and Riparian Zones*	The downstream riparian community nearest the Proposed Action is Yellow Creek, which is separated from the project by about 8.8 miles of ephemeral channel, including intervals of unchannelized overland flow. About 50% of the total surface disturbance attributable to the project would be subject to timely reclamation such that the project's longer term footprint would amount to 4.3 acres. Considering the limited extent of surface disturbance, required compliance with State and federal drilling and reclamation regulations (including storm water containment), and lengthy separation of project

Determination[1]	Resource	Rationale for Determination
		work from Yellow Creek's perennial channel, there is no foreseeable likelihood that the Proposed Action would contribute sediments or contaminants capable of adversely influencing riparian resources or processes.
PI	Vegetation*	See discussion below.
PI	Invasive, Non-native Species	See discussion below.
PI	Special Status Animal Species*	See discussion below.
PI	Special Status Plant Species*	See discussion below.
PI	Migratory Birds	See discussion below.
NI	Aquatic Wildlife*	The discussion for Riparian/Wetland Zones pertains to aquatic habitats as well. The aquatic community nearest proposed project work is associated with Yellow Creek immediately below Barcus Creek (8.8 ephemeral channel miles downstream). Yellow Creek supports BLM-sensitive mountain and flannelmouth sucker and northern leopard frog and empties to the White River about 3.2 channel miles below Barcus Creek. The White River and its 100-year floodplain are designated critical habitat for the endangered Colorado pikeminnow and supports additional BLM-sensitive fish that are largely confined to the river (i.e., roundtail chub and bluehead sucker). As discussed above, the likelihood of the Proposed Action contributing to sediment or contaminant levels capable of adversely influencing these species or their habitats would be remote.
PI	Terrestrial Wildlife*	See discussion below.
PI	Wild Horses	See discussion below.
Heritage Resources and the Human Environment		
PI	Cultural Resources	See discussion below.
PI	Paleontological Resources	See discussion below.
NP	Native American Religious Concerns	No Native American Religious Concerns are known in the area, and none have been noted by Northern Ute Tribal authorities. Should recommended inventories or future consultations with Tribal authorities reveal the existence of such sensitive properties, appropriate mitigation and/or protection measures may be undertaken.
PI	Visual Resources	See discussion below.
PI	Hazardous or Solid Wastes	See discussion below.
PI	Fire Management	See discussion below.
NI	Social and Economic Conditions	There would not be any substantial changes to local social or economic conditions.

Determination[1]	Resource	Rationale for Determination
NP	Environmental Justice	According to recent Census Bureau statistics (2000), there are no minority or low income populations within the WRFO.
NI	Lands with Wilderness Characteristics	The Proposed Action is located adjacent to southern boundary of lands with wilderness characteristics unit 13 and adjacent to the west boundary of lands with wilderness characteristics unit 11. There is no ground disturbance proposed within either unit and therefore there is no impact to the wilderness characteristics as a result of implementing the Proposed Action.
Resource Uses		
NP	Forest Management	The Proposed Action does not impact any forested areas.
PI	Rangeland Management	See discussion below.
PI	Floodplains, Hydrology, and Water Rights	See discussion below.
PI	Realty Authorizations	See discussion below.
PI	Recreation	See discussion below.
PI	Access and Transportation	See discussion below.
NP	Prime and Unique Farmlands	There are no Prime and Unique Farmlands within the project area.
Special Designations		
NP	Areas of Critical Environmental Concern	The nearest ACEC is Duck Creek, which is 2.7 miles to the south of the Proposed Action. There will be no conceivable impacts associated with the Proposed Action.
NP	Wilderness	There are no designated Wilderness areas or Wilderness Study Areas located near the Proposed Action.
NP	Wild and Scenic Rivers	There are no Wild and Scenic Rivers in the WRFO.
NP	Scenic Byways	There are no Scenic Byways within the project area.

[1] NP = Not present in the area impacted by the Proposed Action or Alternatives. NI = Present, but not affected to a degree that detailed analysis is required. PI = Present with potential for impact analyzed in detail in the EA.
* Public Land Health Standard

AIR QUALITY

Affected Environment: The Proposed Action is located within the White River Basin, which is an attainment area for national and state air quality standards. The attainment designation means that no violations of ambient air quality standards have been documented in this basin (EPA 2014). The Proposed Action is located more than 10-miles from any non-attainment or special designation airshed. Non-attainment areas are designated by U.S. Environmental Protection Agency (EPA) as having air pollution levels that persistently exceed the National Ambient Air Quality Standards (NAAQS). The closest non-attainment areas are along the Front Range corridor in Colorado and are in non-attainment for ozone. The closest special designation areas are Dinosaur National Monument, located northwest of the project area (designated Class II airshed with Prevention of Significant Deterioration (PSD) with thresholds for sulfur oxides

and visibility), and the Flat Tops Wilderness Area located east of the Proposed Action (designated Class I).

Projects that could impact special designation areas and/or non-attainment areas require special consideration from the Colorado Department of Public Health and Environment (CDPHE) and the EPA. General conformity regulations require that federal activities do not cause or contribute to a new violation of NAAQS; that actions do not cause additional or worsen existing violations of the NAAQS; and that attainment of these standards is not delayed by federal actions in non-attainment areas.

The Clean Air Act (CAA) requires the Environmental Protection Agency (EPA) to set NAAQS (40 CFR part 50) for criteria pollutants. Criteria pollutants are air contaminants commonly emitted from a majority of emissions sources and include carbon monoxide (CO), lead (Pb), sulfur dioxide (SO_2), particulate matter smaller than 10 and 2.5 microns (PM_{10} and $PM_{2.5}$), ozone (O_3), and nitrogen dioxide (NO_2).

The EPA regularly reviews the NAAQS (every five years) to ensure that the latest science on health effects, risk assessment, and observable data such as incidence rates are evaluated. The Colorado Air Pollution Control Commission (CAPCC), by means of an approved State Implementation Plan (SIP) and/or delegation by EPA, can establish state ambient air quality standards for any criteria pollutant that are at least as stringent as, or more so, than the federal standards. Ambient air quality standards must not exceed Colorado Ambient Air Quality Standards (CAAQS) and NAAQS in areas where the public has general access.

The Proposed Action is in Rio Blanco County within the Western Counties Monitoring Region of Colorado (APCD 2010). Local air quality parameters, including particulates and ozone are measured at monitoring sites located at Meeker, Rangely, and Dinosaur and near the Flat Tops Wilderness Area. Ozone data have been collected at Federal reference air quality sites supported by the BLM since 2010 and located outside Meeker and Rangely. The closest location for an Interagency Monitoring of Protected Visual Environments (IMPROVE) site is near the Flat Tops Wilderness, northeast of the Project Area. IMPROVE sites measure visibility impairment from airborne particles.

Environmental Consequences of the Proposed Action:

Direct and Indirect Effects: This action would include the building of a drilling pad, upgrading existing roads and building a new access road, installation of pipelines, and the drilling and production of two natural gas wells on the pad.

The operator has committed in their surface use plan to limit unnecessary emissions from point or nonpoint pollution sources and prevent air quality deterioration from necessary pollution sources in accordance with all applicable state, federal and local air quality law and regulation. The operator has agreed to treat all access roads with water during construction and drilling activities so that there is not a visible dust trail behind vehicles. The use of chemicals or treated produced water as a dust suppressant on BLM lands would require prior written approval from BLM.

The Proposed Action would result in short-term impacts on air quality near the drilling pad. Implementation of the Proposed Action would result in emissions of criteria pollutants, hazardous air pollutants (HAPs), and greenhouse gases (GHGs). Air quality would be impacted by engine exhaust from vehicles and any stationary fuel combustion sources during drilling and completion activities. Increases in the following criteria pollutants would occur due to combustion of fossil fuels: carbon monoxide, nitrogen dioxide, sulfur dioxide, and ozone (a secondary pollutant formed photochemically from volatile organic compounds (VOCs) and nitrogen oxides (NO_x)). Emissions of particulate matter would be generated from construction, drilling and during the production phases.

Particulate matter or dust is made up of a number of components, including acidic aerosols (such as nitrates and sulfates), organic chemicals, metals, soil or dust particles, and allergens (such as fragments of pollen or mold spores). Dust production is most likely during construction and drilling activities, especially when conditions are dry and/or windy. Fine particles (less than 2.5 µm) are efficient in scattering and absorbing light and are the major contributor to visibility problems. The effects of particulates include visibility degradation, climate change, vegetation damage and human health impacts. The chemical composition of $PM_{2.5}$ consists of five major components: sulfate, nitrate, organic carbon, elemental carbon (also called black carbon), and crustal (rock and soil) material.

EPA's NAAQS uses NO_2 as an indicator of $NO_{x,}$ which are generated by the combustion of fossil fuels and therefore would be an emitted during drilling, completion and hydraulic fracturing operations, from transportation vehicles during rig moves, maintenance and during production, and from compressors used to manage natural gas pressures for drilling and production operations for the wells. NO_2 forms quickly from cars, trucks and buses, power plants, and off-road equipment emissions. The main effect of NO_2 is that it inflames the lining of the lungs and increases the likelihood of respiratory problems, such as wheezing, coughing, colds, flu and bronchitis. People with asthma or heart disease are most at risk.

Ozone advisories and alerts were issued in the winter of 2011 and 2013 for Rio Blanco County, based on data collected from the Rangely monitoring site west of this location. Ozone can cause breathing difficulties and worsen respiratory infections, especially in the elderly, the young and those with pre-existing ailments such as asthma. Ozone also affects vegetation and ecosystems, leading to reductions in agricultural crop and commercial forest yields, reduced growth and survivability of tree seedlings, and increased plant susceptibility to disease, pests, and other environmental stresses (e.g., harsh weather). Generation of ozone under stagnate air masses, with continuous snow cover or in regions with soils with a low albedo can increase dramatically. Ozone produced under stagnant air masses can be transported many miles.

Additional low, short-term impacts to air quality may occur due to venting or flaring of gas from wells and VOCs from pits, storage and treatment of cuttings, equipment leaks, and from tanks. VOCs including hazardous air pollutants (HAPs) commonly associated with oil and gas production (benzene, toluene, ethylbenzene, xylene, and n-hexane) would be released at the nearby water treatment plant during processing and transportation of the disposal fluids. The amount of these releases are difficult to estimate, but are expected to be within CDPHE air permit limits estimated in tons per year. Non-criteria pollutants (NAAQS have not been set for

non-criteria pollutants), such as nitric oxide, air toxics (e.g., benzene), and total suspended particulates may experience slight, temporary increases as a result of the Proposed Action.

Even with these increased pollutants expected from the Proposed Action, would be unlikely to result in an exceedance of NAAQS or CAAQS, would not be likely to be located in future non-attainment area, and would be likely to comply with applicable PSD increments and other significant impact thresholds.

Cumulative Effects: Air quality in Region 11 (Western Slope of Colorado) is affected by both mobile and stationary emitters of air pollutant (CAPCD 2013). Fugitive dust can come from natural sources that are not preventable, such as volcanic eruptions, large regional dust storms, and wildfires. PM_{10} and $PM_{2.5}$ are created from windblown dust and soil from fields, agricultural crops, agricultural livestock, paved road re-entrained dust, unpaved roads, construction activities, and mining and quarrying, construction sites, automobile and diesel engine exhaust, waste burning, soot from wood fires, and sulfates and nitrates from combustion sources, such as industrial boilers (CAPCD 2013). Emissions of particulate matter would be generated from construction, drilling, and during the production phase. The following criteria pollutants would be emitted during the combustion of fossil fuels during construction, drilling and operation: CO_2, NO_2, SO_2, and ozone (a secondary pollutant formed photochemically from VOCs and NOx).

Downward trends in annual NO_2, CO, and SO_2 have been measured at air quality monitoring sites in the region and are likely the result of national emissions control programs. For example, between 1990 and 2012, national emissions of NO_x and VOC emissions have declined 56 percent and 35 percent, respectively (CAPCD 2013). Decreases in SO_x emissions from diesel fuel and power plants coincides with in a decrease in SO_2 measured at IMPROVE and other air quality monitoring programs. Even though concentrations of these pollutants are low and decreasing, EPA continues to track these pollutants because of their contribution to secondary air pollutants and issues (e.g., ozone, $PM_{2.5}$, and visibility).

In general, air quality within the region is good due to few emission sources, good dispersion characteristics and national trends showing a decrease in some air pollutants. However, some emissions have caused localized or regional level increases in pollution monitoring values, such as ozone and $PM_{2.5}$ within the past ten years. This has led to an increase in air quality monitoring in the region, including the BLM supported Federal reference air quality monitoring sites in Rangely and Meeker.

Environmental Consequences of the No Action Alternative:

Direct and Indirect Effects: No increase in impacts to air quality would occur from the No Action Alternative.

Cumulative Effects: Impacts for the Western Slope of Colorado would be similar to those described for the action alternative.

Mitigation: None.

GEOLOGY AND MINERALS

Affected Environment: Surficial geology of well pad BCU 31-25-199 is a tertiary unnamed tongue of the Uinta Formation (Hail). WPX's' targeted zone is in the Mesaverde. During drilling, potential water, oil shale, oil, gas, and sodium resources would be encountered from surface to the targeted zone. Fresh water aquifer zones that may be encountered during drilling are the Perched in the Uinta, and the A-groove, B-groove, and dissolution surface in the Green River formation. These geologic zones, along with upper portion of the Wasatch are known for difficulties in drilling and cementing. The well pad and wells are located in the area identified in the White River ROD/RMP as available for sodium and oil shale leasing. Natural Soda Inc.'s commercial solution mining operation for sodium bicarbonate is over eight miles southeast of proposed location and the nearest oil shale research development and demonstration (RD&D) lease COC69194 is greater than six miles to the southwest. Both the proposed well pad and the two bottom hole locations are located in federal oil and gas lease COC60482, which is committed to the Barcus Creek federal exploratory oil and gas unit COC70700X. The design of the proposed well pad would allow for the accommodation of 22 wells on 10 acre bottom hole spacing. Limited oil and gas exploration has occurred within a one mile radius of the proposed well pad. This consists of two drilled and abandoned wells and two producing wells on three well pads (COGCC).

Environmental Consequences of the Proposed Action:

Direct and Indirect Effects: There is potential for commingling of aquifer zones, however, the cementing procedure of the Proposed Action isolates the formations and would prevent the migration of gas, water, and oil between formations, including the oil shale zones. Development of these wells would deplete the hydrocarbon resources in the targeted formation. The Proposed Action is over eight miles from the nearest sodium lease and more than seven miles from the nearest oil shale RD&D would have no potential to effect existing or foreseeable sodium or oil shale development.

Cumulative Effects: As mentioned above, the COGCC database identifies two drilled and abandoned wells and two producing oil and gas wells within a one mile radius of well pad BCU 31-25-199. An additional 176 wells (8 pads) for full development of the natural gas resource within this one mile radius would be required if all of the 22 wells are developed and if bottom hole spacing of 10 acres is required for the recovery of the natural gas resources. It is unlikely development of the oil and gas resources would interfere with the foreseeable development of sodium or oil shale resources.

Environmental Consequences of the No Action Alternative:

Direct and Indirect Effects: The natural gas resources in the targeted zones would not be developed at this time.

Cumulative Effects: There would be no contribution for potential conflicts between sodium, and natural gas resources.

Mitigation: None

SOIL RESOURCES

Affected Environment: The classifications of soils within 30 meters of the proposed well pad and centerlines of the access road and pipelines that could be impacted by the Proposed Action are shown in Table 4. The Proposed Action would disturb approximately 15 acres for the well pad and the access road and pipelines.

Table 4. Soil Classifications within 30 Meters of the Pad and the Centerline of Roads and Pipelines (NRCS, 2008).

Soil Classification	Surface Texture	Erosion Hazard	Rutting Hazard	Potentially Impacted (Acres)
Glendive fine sandy loam	fine sandy loam	Moderate	Severe	19
Piceance fine sandy loam, 5 to 15 percent slopes	fine sandy loam	Severe	Severe	14
Torriorthents-Rock outcrop complex, 15 to 90 percent slopes	channery loam	Severe	Severe	4

Of the 37 acres analyzed, no surface disturbance would occur on soils with landslide potential, but one-third acre of disturbance would occur on fragile soils. All the soils have a severe erosion hazard rating and the Piceance fine sandy loam has a severe rutting hazard.

Environmental Consequences of the Proposed Action:

Direct and Indirect Effects: Direct impacts from the construction of the well pad, access road and pipeline installation would include soil compaction, removal of vegetation, exposure of subsoil, mixing of soil horizons, loss of topsoil productivity, and an increase in the susceptibility of soils to wind and water erosion. Compaction due to construction activities reduces aeration, permeability and water-holding capacities of soils. Removal of vegetation exposes soils to erosion from rainfall, wind and surface runoff. Exposure of subsoil and mixing of soil horizons can change the physical characteristics of subsoil and may reduce the productivity of these soils before reclamation is complete. Loss of topsoil productivity can occur during soil storage due to nutrient loss through percolation of precipitation through the soils, physical loss and mixing of less productive soil layers during moving and a loss of structure. An increase in surface runoff and sedimentation could be expected from impacted soils and these soils are likely to be less resilient to erosion from surface runoff after disturbance. Final reclamation on the pipeline would likely be achieved within three to five years after installation.

Unstable road surfaces and road surfaces not adequate for all-weather conditions, especially on roads with steep grades, can rut and rapidly lose drainage features causing erosion and instability. With proper BMPs for stormwater, engineered access roads, construction, reclamation and mitigation, impacts to soils outside the 30-meter buffer around surface disturbance are not expected.

Indirect impacts to soils off the construction sites include increased runoff, erosion and disposition of soils. Implementation of BMPs for stormwater and reclamation would reduce impacts from this project and limit impacts to construction sites. However, there is still the potential for intense storm events or BMP failures resulting in these indirect impacts. This project could result in contamination of surface and subsurface soils due to unintentional leaks or

spills from equipment and if these spills occurred they would affect the productivity of soils. Impacted soils would typically be removed or remediated on site and therefore loss of soil productivity would be temporary-maybe three to five years.

Cumulative Effects: Well pad, pipelines and road are in the Yellow Creek 5th-Level Hydrologic Unit Code watershed. This watershed is within the Mesaverde play area for natural gas and is expected to have two to three well pads per section for the majority of the watershed. Production wells include surface disturbance for well pads, pipelines, roads and support facilities. In addition to other oil and gas activity, dispersed recreation (hunting) would make use of Rio Blanco County road 68. Use of the road during poor conditions could result in failure of drainage features, increased erosion, and dust generation. Livestock grazing occurs on public and private lands in the area and these activities may reduce canopy cover and lead to localized erosion in some reclamation areas.

In general, soil disturbance in the Proposed Action and other activities would be likely to reduce soil productivity in the localized areas of disturbance, but would be unlikely to impact overall soil productivity for the long term.

Environmental Consequences of the No Action Alternative:
Direct and Indirect Effects: No impacts to soils would occur.

Cumulative Effects: Impacts would be similar to those described for the Proposed Action.

Mitigation: None.

Finding on the Public Land Health Standard #1 for Upland Soils: With mitigation, this action would be unlikely to reduce the productivity of soils on public lands.

SURFACE & GROUND WATER QUALITY

Affected Environment: Surface Water: Well pad, pipelines and road are on a ridgeline that separates the Piceance Outlet and Yellow Creek 5th-Level Hydrologic Unit Code watersheds. Table 5 describes water segments that may be impacted by this project.

Table 5. Water Quality Classification Table (CWQCC 2013)

Segment	Segment Name	Use Protected	Protected Beneficial Uses			
			Aquatic Life	Recreation	Agriculture	Water Supply
13b	Tributaries to Yellow Creek	No	Warm 2	Not Primary Contact Recreation	Yes	No
13c	Mainstem Yellow Creek	No	Warm 2	Not Primary Contact Recreation	Yes	No

Segment 13b and 13c, tributaries to Yellow Creek and Yellow Creek are protected for warm water aquatic life (Warm 2). The warm designation means the classification standards would be protective of aquatic life normally found in waters where the summer weekly average temperatures frequently exceed 20 °C. The Warm 2 designation means that it has been determined that these waters are not capable of sustaining a wide variety of warm water biota. These segments are protected for potential primary recreation and agriculture. Segment 13c is on the monitoring and evaluation list for total recoverable iron and aquatic life (CWQCC 2012). This is a low priority and was listed for the first time in 2012 for aquatic life.

Groundwater: Precipitation in this area generally moves from areas of recharge to surface waters via alluvial aquifers and on the surface during spring melt and rain storms. A portion of annual precipitation infiltrates to deeper bedrock aquifers that contribute to contact springs. Springs and groundwater inputs generally occur in both bedrock and alluvial aquifers along valley bottoms. Perched groundwater zones occur locally when saturated zones contact differences in permeability and solubility of individual formations. These contact zones can occur in the ridges between surface water drainages and may be manifested as springs and seeps above the valley floor in outcrop areas.

Geological formations important for freshwater aquifers in this area are the Uinta and Green River Formations. The Green River Formation can be subdivided into upper and lower aquifers, separated by the Mahogany confining unit. The Uinta Formation and the upper Green River can be referred to as the upper aquifers and the primary aquifer is called the A-Groove. The zone in the Green River Formation below the Mahogany zone can be referred to as the lower aquifers were the primary aquifer is the B-Groove. Oil shale and nacholite mining have occurred in and below the Mahogany zone. The upper aquifer, in particular the Uinta formation, is important for stock wells. Natural springs in the area are typically associated with the A or B Grove aquifers. This area is also an important recharge area for the baseflow in Yellow Creek.

Environmental Consequences of the Proposed Action:

Direct and Indirect Effects: Surface Waters: Clearing, grading, and soil stockpiling activities associated with the Proposed Action would alter overland flow and natural infiltration patterns. Potential direct impacts would include surface soil compaction caused by construction equipment and vehicles, removal of vegetation and disturbance of surface soils, which would increase rain-splash erosion and reduce the soil's ability to absorb water and increase the volume and rate of surface runoff-which in turn would increases surface erosion. Stormwater measures and best management practices, including periodic monitoring of any erosion problems, would be essential to avoid erosion and increased sedimentation to surface waters.

The soil analysis indicates the potential for severe rutting on the access road, therefore good road maintenance for drainage features, surfacing the road, and mitigation in the soils section would reduce impacts to surface waters. Road maintenance and maintaining an effective all-weather surface should reduce the risk of increased sedimentation to surface waters.

Surface runoff associated with storm events may increase sediment loads in surface waters down gradient of disturbed areas. Sediment can be deposited and stored in minor drainages where it could be moved into Yellow Creek during heavy convective storms. Surface erosion for this

project would be likely during the construction and early production phases of the project and would be mitigated using BMPs for stormwater.

Groundwaters: The proposed casing and cementing program for each of the wells has been designed to protect and/or isolate all useable water zones. Potential freshwater zones would be protected by surface casing, cementing behind these casing. The grade of cement used would vary, but drilling practices would be employed and checked by the BLM to eliminate gaps between cement. Cement protects the well casings from deterioration over the life of the well and allows casings to withstand pressure increases during completion, hydrologic fracturing, and injection activities.

Loss of drilling fluids may occur at any time in the drilling process, due to changes in porosity or other properties of the rock being drilled. When this occurs, drilling fluids may be introduced into the surrounding formations which could contain freshwater aquifers. If drilling fluids are lost, aquifers may be contaminated by drilling additives. Using bentonite, freshwater and other additives that would not contaminate groundwater would mitigate the loss of drilling fluids, since these substances would not impact the quality of groundwater resources.

Impacts to groundwater resources could occur due to failure of well integrity, failed cement, surface spills, and/or the loss of drilling, completion and hydraulic fracturing fluids into groundwater. Types of chemical additives used in drilling activities may include acids, hydrocarbons, thickening agents, lubricants, and other additives that are operator- and location-specific. Concentrations of these additives also vary considerably and are not always known since different mixtures can be used for different purposes in the same well bore. According to COGCC requirements, all chemicals (greater than 500 pounds) used during drilling, completion, and work-over operations, including hydraulic fracturing treatments, would be disclosed in a chemical disclosure form by well site.

Known groundwater bearing zones in the project area would be protected by the drilling plan and well design as described. Groundwater resources (including the contact springs, perched aquifers, and groundwater zones described in the Affected Environment) are all in elevations above the surface casing. With proper drilling and completion practices, contamination of groundwater resources would be unlikely.

Cumulative Effects: Well pad, pipelines and road are in the Yellow Creek 5th-Level Hydrologic Unit Code watershed. This watershed is within the Mesaverde play area for natural gas and is expected to have two to three well pads per section. Natural gas production wells result in surface disturbance for well pads, pipelines, roads and support facilities. In addition to other oil and gas activity, dispersed recreation (hunting) would make use of Rio Blanco County (RBC) road 88 and would add to the wear of the road. Use of the road during poor conditions could result in failure of drainage features and additional road maintenance activities may be needed to keep this road in good shape. Livestock grazing occurs on public and private lands in the area and these activities may reduce canopy cover and lead to localized erosion in some reclamation areas. Nacholite mining and oil shale research and development are occurring and have occurred in the Yellow Creek watershed.

Environmental Consequences of the No Action Alternative:

Direct and Indirect Effects: Neither ground nor surface water quality would be impacted by the No Action Alternative.

Cumulative Effects: Impacts would be similar to those described for the No Action Alternative, but would not include the impacts from the Proposed Action.

Mitigation: The following should be added as Conditions of Approval (COAs):

1. To protect surface waters below the project area, the operator will keep road inlet and outlet ditches, sediment retention basins, and culverts free of obstructions, particularly before and during spring run-off and summer convective storms. Provide adequate drainage spacing to avoid accumulation of water in ditches or on road surfaces.

2. When drilling to set the conductor and surface casing, drilling fluid will be composed only of fresh water, bentonite, and/or a benign lost circulation material that does not pose a risk of harm to human health or the environment.

Finding on the Public Land Health Standard #5 for Water Quality: It is unlikely that construction of this well pad, access road, installation of pipelines or drilling and completion activities would result in an exceedence of state water quality standards.

VEGETATION

Affected Environment: The proposed project is located within the rolling loam, foothill swale and stony foothill ecological sites. Table 6 outlines each ecological site the primary vegetation found within each site.

Table 6: Ecological Site and Community Appearance within the Project Area.

Ecological Site / Woodland Type	Plant Community Appearance	Predominant Plant Species in the Plant Community
Rolling Loam	Sagebrush / Grass Shrubland	Wyoming big sagebrush, winterfat, low rabbitbrush, horsebrush, bitterbrush, western wheat grass, Indian rice grass, squirreltail, June grass, Nevada and Sandberg bluegrass
Foothill Swale	Grass/Open Shrub Shrubland	Basin wildrye, western wheatgrass, slender wheatgrass, streambank wheatgrass, Indian rice grass, Nevada bluegrass, basin big sagebrush, fourwing saltbush, rubber rabbitbrush
Stony Foothill	Grass/Open Shrub Shrubland	Beardless bluebunch wheatgrass, western wheatgrass, needle-and-thread, June grass, Indian rice grass, fringed sage, Wyoming big sagebrush, black sage, serviceberry, pinyon and juniper

The proposed project area does contain some isolated patches of cheatgrass and other annual invasive e.g. mustards. Their occurrence is generally pretty sparse throughout the project area.

Environmental Consequences of the Proposed Action:

Direct and Indirect Effects: The Proposed Action would disturb a mid-seral class of vegetation for a total of 15 acres. The disturbance would require the complete removal of vegetation from the soil surface. Disturbance for the access road and well pad (7.3 acres) would be considered long-term disturbance and would be expected to remain for the life of the well pad. Acreage associated with long-term vegetative loss would temporally decrease with well pad reclamation outside of the operational area (interim reclamation). Without successful reclamation of seeded species within this landscape, a potential would exist to increase the ground cover of undesirable plant species (e.g. cheatgrass) that invade disturbed sites.

The 7.7 acres of disturbance for the pipeline would be considered a short-term vegetative loss. Short-term soil and vegetation disturbances would be offset in the long-term by successfully reclaiming the disturbed area with a seed mix that is suited for this ecological site. As this area has a component of cheatgrass and other undesirable species within the plant community, successful re-vegetation efforts would slightly increase desirable plant species within the rangelands.

Cumulative Effects: The proposed project, when added to other projects and developments, in and near the project area, as well as within the Piceance Basin as a whole, would result in an increase in short-term removal of existing vegetation on private and public land. Long-term changes in plant community composition and structure would also occur on those project sites and on a broader scale from activities such as livestock grazing. Of the total potential vegetation removal near the project area and the Piceance Basin, the proposed project would not result in a noteworthy increase in vegetation disturbance or long-term changes in plant community.

Environmental Consequences of the No Action Alternative:

Direct and Indirect Effects: The No Action Alternative would result in no impacts to vegetation around the pad, road, and pipeline corridors.

Cumulative Effects: Denial of the proposed project would have little impact on the cumulative effect of oil and gas development impacts to the vegetative communities in the general project area.

Mitigation:

1. Seed Mix #2 with a couple of modifications is recommended for the well pad, road, and pipeline. Application rates are shown in pounds of pure live seed per acre.

Table 7: Recommended Seeding Species and Application Rates

Variety	Common Name	Scientific Name	Application Rate
Rosana	Western Wheatgrass	*Pascopyrum smithii*	4
Rimrock	Indian Ricegrass	*Achnatherum hymenoides*	3.5
Whitmar	Bluebunch Wheatgrass	*Pseuforoegneria spicata*	4
	Needle and Thread	*Heperostipa comata*	2
Timp	Northern Sweetvetch	*Heysarum boreale*	2
	Scarlet Globemallow	*Sphaeralcea coccinea*	0.5

2. Phase II and Final reclamation will be considered successful once the operator has attained 70 percent of the DPC's vegetation cover and composition (early seral state), as defined by the range/ecological site description or in relation to the approved seedmix. On woodland or shrub sites, this would equate to the capability of those sites in a herbaceous state. These attributes (i.e. cover and composition) will be assessed using quantitative methods, such as those presented in BLM Technical Reverence 1730-1, 1734-4 or other pre-approved methods.
3. The vegetative community established on the reclaimed site is capable of persisting without continued intervention (excluding routine weed management) and will allow plant community successional processes to progress toward advanced community states.
4. Bare ground does not exceed the range/ecological site description, or if not described, bare ground will not exceed that of a representative undisturbed DPC meeting the Colorado Standards for Public Land Health.

Finding on the Public Land Health Standard #3 for Plant and Animal Communities: With the implementation of mitigation measures and successful re-vegetation, the Proposed Action would have no effect on the status of Land Health Standard 3 in the project area or at a landscape scale.

INVASIVE, NON-NATIVE SPECIES

Affected Environment: In October of 2013, West Water Engineering completed a noxious weed survey with a 100 meter buffer of the project. This survey looked at mostly presence/absence because of the low densities and scattered distribution the cheatgrass was not mapped. According to the survey, the project area is generally not impacted by weeds (WestWater 2013). They did observe low densities of cheatgrass, which is an annual invasive grass that has the ability to dominate disturbed sites. No other state noxious weeds were noted. The project site does also contain other annual mustards, and Russian thistle, which are also annual invasive species that are not on the state noxious weed list. These invasive species also have the ability to move into disturbance and become a dominate part of the herbaceous understory.

Environmental Consequences of the Proposed Action:

Direct and Indirect Effects: The disturbance associated with the Proposed Action could create or exacerbate a noxious weed problem by importing weed seed on vehicles and equipment, or by creating suitable conditions in the form of non-vegetated disturbed areas. Construction activities could spread noxious weed species to other areas by carrying seeds or plant parts (rhizomes) on construction equipment.

Establishment of noxious or invasive weeds on the project's disturbed soils could result in some areas being dominated by these aggressive species. It could also result in additional seed sources that would help to expand the occurrence of these species into adjacent plant communities

Cumulative Effects: The proposed project could contribute to the noxious and invasive plant species present in the surrounding areas. However, existing roads through the area are common sources of invasive and noxious weeds, so elimination of these species from the general area may be unlikely.

Environmental Consequences of the No Action Alternative:

Direct and Indirect Effects: Noxious and invasive plants would continue to be present within the vicinity of the project area and, depending on the aggressiveness of weed treatment activities, may continue to spread.

Cumulative Effects: Cumulative effects would be similar to those from the Proposed Action.

Mitigation:

1. The operator should eliminate any noxious plants before seed production occurs. The operator should clean all off-road equipment to remove seed and soil prior to commencing operations within the project area.
2. If the Project site contains less than 25 percent relative cover of undesirable species, interim and final reclamation will be considered acceptable when relative cover of undesirable species on the project site does not exceed 5 percent.
3. If the project site contains 25 percent to 50 percent relative cover of undesirable species, interim and final reclamation will be considered acceptable when relative cover to of undesirable species on the project site does not exceed 10 percent.

SPECIAL STATUS ANIMAL SPECIES

Affected Environment: The White River and its 100-year floodplain are designated critical habitat for the Colorado pikeminnow from Rio Blanco Lake (upstream of Yellow Creek mouth) downstream to the Green River, though occupied habitat is confined to the river below Taylor Draw dam, about 28 river miles downstream of Yellow Creek (see Riparian/Wetland and Aquatic Wildlife discussions in Table 2). The White River is also inhabited by a number of BLM-sensitive fish, including roundtail chub and the flannelmouth, bluehead, and mountain sucker. Major tributaries in the Piceance Basin draining to the White River, including Yellow Creek, are also widely inhabited by BLM-sensitive mountain sucker and northern leopard; flannelmouth suckers are generally confined to these systems near their mouths.

The midget faded rattlesnake is a BLM-sensitive species, as well as a species of special concern for the State of Colorado. This species occurs solely within the Green River Formation in southeast Wyoming, eastern Utah, and western Colorado and is typically associated with bedded sandstone outcrops and fallen mid-slope slabs on south to southeast-facing exposures below 7,000 foot elevation. This species is listed as sensitive due to its limited distribution. In addition, low reproductive potential, low abundance, narrow habitat preferences, patchy distribution, and vulnerability to human-caused mortality and road-kill near the dens make these snakes particularly susceptible to localized extirpation from surface disturbing activities. These snakes emerge from hibernacula (dens) in mid-April. Gravid females and juveniles tend to remain in

rock outcrop habitat in close proximity to their dens (20-200 meters) throughout the summer and early fall months, while males and non-reproductive females disperse an average of 1 km from the den. All snakes return to their den sites in mid to late October. This snake, likely the only species in the Piceance Basin, has been recently been documented from several locations along the Barcus and Yellow Creek valleys. Current reports of this species are downstream, but in some cases, very near proposed project work.

There are no water features known to be capable of supporting a breeding population of Great Basin spadefoot within the general project area. The BLM-sensitive Brewer's sparrow is addressed in the Migratory Bird section.

Environmental Consequences of the Proposed Action:

Direct and Indirect Effects: The proposed project area is separated from the nearest critical habitat for Colorado pikeminnow by about 9 miles of ephemeral channel and an additional 3.2 miles of perennial stream (Yellow Creek). Given the limited extent of surface disturbance, required compliance with State and Federal drilling and reclamation regulations, and lengthy separation of project work from designated and occupied aquatic habitat, there is no foreseeable likelihood that the Proposed Action would contribute sediments or contaminants capable of adversely influencing downstream aquatic habitat conditions or floodplain processes.

The Proposed Action would indirectly influence critical habitat designated for the endangered Colorado River fish in terms of water depletion alone. In May 2008, BLM prepared a Programmatic Biological Assessment (PBA) that addresses water depleting activities associated with BLM's fluid minerals program in the Colorado River Basin in Colorado. In response to BLM's PBA, the FWS issued a Programmatic Biological Opinion (PBO)(ES/GJ-6-CO-08-F-0006) on December 19, 2008, which determined that BLM water depletions from the Colorado River Basin, as conditioned by the implementation of the reasonable and prudent alternative, are not likely to jeopardize the continued existence of the Colorado pikeminnow, humpback chub, bonytail, or razorback sucker, and that BLM water depletions are not likely to destroy or adversely modify designated critical habitat.

The Recovery Implementation Program for Endangered Fish Species in the Upper Colorado River Basin (initiated in January 1988) serves as the reasonable and prudent alternative to avoid jeopardy and provide recovery to the endangered fishes by depletions from the Colorado River Basin. The PBO addresses water depletions associated with fluid minerals development on BLM lands, including water used for well drilling, hydrostatic testing of pipelines, and dust abatement on roads. The PBO includes reasonable and prudent alternatives developed by the FWS, which allow BLM to authorize oil and gas wells that result in water depletion while avoiding the likelihood of jeopardy to the endangered fishes and avoiding destruction or adverse modification of their critical habitat. As a reasonable and prudent alternative in the PBO, FWS authorized BLM to solicit a one-time contribution to the Recovery Implementation Program for Endangered Fish Species in the Upper Colorado River Basin (Recovery Program) in the amount equal to the average annual acre-feet depleted by fluid minerals activities on BLM lands. Water use attributable to this project (estimated at about five acre-feet for the two wells) would be entered into the White River Field Office fluid minerals water depletion log, which will be submitted to the Colorado State Office at the end of the Fiscal Year.

Assuming surface disturbance associated with the pad and pipeline would take place in March, impacts to midget faded rattlesnakes would probably be limited to the potential for vehicle-related mortality along primary county roads. Concentrated vehicle activity that coincides with denning functions or dispersal along valley corridors frequented by snakes could pose considerable risk to the persistence of any particular subpopulation and contribute to local collapse of population clusters in the Barcus Creek and lower Yellow Creek valleys. These impacts are particularly difficult to manage on long-established county road systems for which BLM has virtually no oversight authority. However, the operator has selected a primary access route (RBC 122) that would substantially minimize the traverse of these valley-associated habitats. Although considered impractical for BLM to relegate all vehicle use associated with this location's development to RBC 122 via a Condition of Approval, WRFO would instead seek the operator's voluntary cooperation and commitment in reducing non-emergency traffic on RBC 88 (from the location northeast to Yellow Creek) as much as practical while the snakes are active from late April through mid-October and confining necessary vehicle use to the hours between 11 AM to 6 PM when the snakes are more apt to be stationary and least susceptible to vehicle-related mortality.

Cumulative Effects: Incremental flow depletions from the Upper Colorado River system contribute to cumulative reductions in flow volume that affect seasonal fluctuations in flow, water quality, and channel/floodplain structure as important determinants of endangered fish habitat. However, the consequences of depletion were considered and conservation measures applied in the context of basin-wide water use in previous section 7 consultation with the USFWS.

Concentrated vehicle traffic associated with well development is expected to occur on an access route (RBC 122) that would minimize the traverse of midget faded rattlesnake habitat. Although it is expected that ancillary vehicle use would occasionally occur on RBC 88 north of the proposed project and add to existing vehicle use from existing well maintenance/production activities and public recreation, it is believed that voluntary measures would be effective in substantially reducing added traffic volume on this road.

Environmental Consequences of the No Action Alternative:

Direct and Indirect Effects: There would be no immediate action authorized that would influence special status species, though it is likely that an alternative action would be proposed.

Cumulative Effects: There would be no action authorized that would contribute immediately to water depletions or pose a risk to midget faded rattlesnakes, as individuals or subpopulations.

Mitigation:

1. WRFO requests WPX's voluntary commitment in refraining from non-emergency use of RBC 88 northeast of the project site toward Yellow Creek as much as practical while midget faded rattlesnakes are active from late April through mid-October and confining necessary use to the hours between 11 AM to 6 PM when the snakes are most apt to be stationary and least susceptible to vehicle-related mortality.

2. In the event project scheduling is altered and project work (e.g., vegetation clearing, earthwork, well development activity, pipeline trenching, reclamation) would be conducted while the snakes are active (i.e., late April through mid-October), surveys for den sites must be performed by qualified biologists in suitable habitat within 200 meters of any project feature, including access. Within 200 meters of a den site, any area slated for vegetation clearing must be cleared for the presence of snakes immediately prior to each day's work. Pipeline trenching, pipeline installation, and trench backfilling should be conducted in a manner that minimizes the length of open trench remaining through the evening and nighttime hours that may entrap snakes dispersing from or returning to den sites.

Finding on the Public Land Health Standard #4 for Special Status Species: Water depletion effects attributable to fluid mineral development would be detrimental to Colorado pikeminnow from the population and habitat perspectives, and by nature and definition, are considered cumulative. These influences were thoroughly analyzed in the programmatic consultation cited above and resulted in the determination that BLM water depletions from the Colorado River Basin, as conditioned by the implementation of the reasonable and prudent alternative, are not likely to jeopardize the continued existence of the Colorado pikeminnow, humpback chub, bonytail, or razorback sucker, and that BLM water depletions are not likely to destroy or adversely modify designated critical habitat.

Although impossible to eliminate all risk of vehicle mortality on midget faded rattlesnakes, WRFO would attempt to gain the operator's cooperation in reducing the likelihood of mortality as much as practicable. Since the snakes have persisted in spite of four pads being developed in Barcus Creek drainage over the past decade, a commitment by the operator would hold promise in maintaining these local populations.

SPECIAL STATUS PLANT SPECIES

Affected Environment: The analysis area for special status plant species was determined to be within marginally suitable habitat for two federally threatened species, Dudley Bluffs bladderpod (*Physaria congesta*) and Dudley Bluffs twinpod (*Physaria obcordata*), occurs within 10 meters (33 feet) along the northwest portion the access road, while moderately suitable habitat occurs approximately 0.7 miles to the south of the proposed well pad. Plant surveys were performed by WestWater Engineering in October of 2013 and neither of the two Dudley Bluff species was observed within 600 meters (1,969 feet) of the project. There are no known occupied occurrences of either Dudley Bluff species within one mile of the project. No other BLM sensitive plant species were observed within 100 meters (328 feet) of the project boundaries during the 2013 survey.

Environmental Consequences of the Proposed Action:

Direct and Indirect Effects: Disturbances within 600 meters of habitat occupied by the Dudley Bluffs bladderpod or Dudley Bluffs twinpod could result in direct adverse effects (FWS 2010), but neither species were documented during surveys (West Water Engineering, 2013). There is minimal potential for the Dudley Bluffs species to expand into the nearby suitable

habitat in the future due to road construction adjacent to the suitable habitat. Disturbance generated by the Proposed Action could result in the invasion and encroachment of non-native species into suitable habitat. The potential loss of suitable habitat could result in a reduction of the future expansion range of the species.

The Proposed Action would have no direct or indirect impacts upon any BLM sensitive plant species.

Cumulative Effects: The development of this pad, pipeline and access road would cumulatively increase the fragmentation of natural communities. The 15 acres of surface disturbance may increase the potential for establishment of non-native plant species in the project area and could adversely impact suitable habitat. An adverse impact to suitable habitat could result in the reduction of potential for the species to expand their range into previously unoccupied habitat.

Environmental Consequences of the No Action Alternative:
Direct and Indirect Effects: There would be no effects to federally-listed or BLM sensitive plant species under the No Action Alternative.

Cumulative Effects: There would be no contribution to previous or existing disturbances under the No Action Alternative.

Mitigation: None

Finding on the Public Land Health Standard #4 for Special Status Species: There no special status plant species that occur within the vicinity of the proposed project and there will be no impacts to special status plants as a result of this project.

MIGRATORY BIRDS

Affected Environment: Breeding birds associated with the project area's sagebrush shrublands nest principally from mid-May through mid-July (15 May to 15 July), with an estimated overall nest density of one nest per acre. It is likely that the site conditions of the project area, including proximity to RBC 88 and conifer encroachment (about 50 trees per acre), suppresses the density and modifies the composition of the breeding bird community. Birds nesting in these sagebrush habitats that have been identified for heightened management attention are limited to Brewer's sparrow (BLM-sensitive). These birds are widely distributed in all sagebrush habitats at appropriate densities throughout the Piceance Basin and northwest Colorado, but tend to nest at reduced (e.g., 50%) densities within 100 meters of travelled roads and where conifer regeneration encroaches on homogenous sagebrush shrubland. Birds that nest more commonly under these circumstances are more generalized in their habitat selection, including blue-gray gnatcatcher, green-tailed towhee, and vesper sparrow.

Environmental Consequences of the Proposed Action:

Direct and Indirect Effects: The Proposed Action is situated on an inside corner of RBC 88, such that all surface disturbance lies within 300 meters of this maintained county road. The proposed pipeline route would be located immediately adjacent to RBC 88 for virtually its entire length.

As scheduled, the project would be implemented prior to the return of migratory birds and would avoid direct involvement or acute disruption of nesting birds (i.e., birds would select nest sites according to their tolerance of ongoing disturbance). Sagebrush cleared for the pad and access (about 7.5 acres) represents longer term loss (several decades) in the availability of upland sagebrush nesting habitat. This loss would be considered incremental and minor in scale relative to that locally available, especially given site-specific conditions that presently reduce its utility as nest habitat and the increasingly inhibitory influence of conifer encroachment. Ultimately, disturbed and reclaimed upland acreage would revert to a shrubland type more conducive to the support of nesting by sagebrush associated species. Sagebrush and greasewood canopies cleared in the bottomlands along RBC 88 (about 8 acres for the pipeline) would be expected to regenerate mature canopies within a decade; however, shrubland habitat within 30 meters of RBC 88 is probably largely avoided and supports few nesting birds. Effective loss of nesting habitat for sagebrush associated species would be equivalent to less than half of optimal acreage, such that the capacity of affected lands to support nesting migratory birds may be reduced by fewer than a dozen nesting territories overall, including less than one-half dozen sagebrush obligates, such as Brewer's sparrow.

Cumulative Effects: Although adverse effects on nest habitat attributable to the Proposed Action would be minor in light of site-specific circumstances, the Proposed Action would contribute incrementally to long-term habitat modification and disturbance-induced disuse of nesting habitat associated with fluid mineral development in the Piceance Basin. Based on projections in the final Oil and Gas Development RMP Amendment/EIS, migratory bird effects attributable to the Proposed Action would be integral with effective habitat losses on the order of five or six percent in the Piceance Basin.

Environmental Consequences of the No Action Alternative:
Direct and Indirect Effects: None.

Cumulative Effects: None.

Mitigation: None. The Proposed Action is advantageously located to effectively minimize its influence on migratory bird nesting activity.

TERRESTRIAL WILDLIFE

Affected Environment: The project area is encompassed by big game general winter range, which is occupied principally from October through April. Although general access to this location would traverse deer severe winter range, the route entails use of a major all-weather county road network that is considered a permanent pre-existing landscape feature.

There is no habitat suitable for the support of woodland or cliff-nesting raptors in the area potentially influenced by this development.

Environmental Consequences of the Proposed Action:

Direct and Indirect Effects: Woody forage lost in the longer term from vegetation clearing (about 7.5 acres) or longer-term facility occupation (~4.3 acres) are minor, relative to that available in the general project area. Sagebrush would likely require decades to develop productive forage properties, but the process of shrub recolonization and successional advance to that state would be initiated with the immediate reclamation of 50 percent of project-related surface disturbance. Herbaceous forage loss would be short-term and reclaimed acreage would likely produce comparable quality and quantities of herbaceous forage within two to three years.

Deer and elk tend to avoid close association with human activity and the proposed location's close proximity to and within an inside corner formed by the regularly maintained RBC 88 detracts to a certain extent from the project site's potential utility as a source of big game forage and cover. However, given the present circumstance, the proposed project would be advantageously located so as to not contribute substantially to further avoidance response and resource disuse (estimated to involve an addition of 15 acres or less), nor would it add appreciably to the current open road system in the Barcus Creek drainage.

Cumulative Effects: The Proposed Action represents a small but incremental contribution to direct and indirect forms of big game habitat loss that is associated primarily with anticipated fluid mineral development in the Piceance Basin (projected up to 14 percent of land base). The project would not affect habitat or features that are known to support raptor nesting activity and would not contribute measurably to cumulative declines in the availability or utility of suitable nest habitat.

Environmental Consequences of the No Action Alternative:

Direct and Indirect Effects: The No Action Alternative would have no immediate influence on local big game habitat, but in the event the Proposed Action was not authorized, it is possible and likely that alternative locations would be more disruptive to big game, involve raptor nest habitat, and require more substantial additions to the local road network.

Cumulative Effects: None in the short term, but alternative siting could elevate this project's short and long-term contribution to cumulative effects on big game and raptor habitat (see above).

Mitigation: None.

Finding on the Public Land Health Standard #3 for Plant and Animal Communities: The general project area continues to support big game use during the winter season without serious impairment from ongoing mineral development. The Proposed Action, as proposed and conditioned, would not add appreciably to existing patterns and intensity of mineral development or human activity and would be consistent with continued meeting of the standard. The No Action Alternative would have no immediate influence on the standard, but in the event this

proposal were not authorized, it is possible that alternative locations would be more disruptive to big game and raptors and involve more substantial additions to the local road network.

WILD HORSES

Affected Environment: The proposed project area is located within the Piceance-East Douglas Herd Management Area (HMA), which covers approximately 190,130 acres of public and private lands within the White River Field Office (WRFO). The proposed project area would result in the removal of approximately 15 acres of land area for the wild horse herd within the HMA. The primary impact would remove existing vegetation for a loss of approximately 1 Animal Unit Month (AUM) of forage and some cover made up of an older stand of tall sagebrush and pinyon/cedar trees. The loss of 15 acres, in the short term, in the HMA would be only a minor loss of percentage of the whole.

The WRFO manages this herd in a manner designed to ensure a healthy, viable breeding population. The Appropriate Management Level (AML) is between 135 – 235 wild horses. To maintain the AML, the WRFO occasionally gathers excess wild horses and removes them from the range and offers them to the public through an adoption program. Based on population models for the herd, an estimated population for the herd is around 300 animals. The next gather and removal for this HMA may occur in 2016.

The proposed project area is located within the Barcus Creek's main drainage area, which has several resident bands of wild horses utilizing this area. These areas are dominated by mixed-aged pinyon/juniper woodlands with pockets of sagebrush and open benches along the finger ridges in the area dominated by native forb and grass communities. The nearby heavier wooded areas provide the required cover for the wild horses used predominant during the summer months for shade and during severe winter storms. The sagebrush and forb/grass communities provide forage habitat. Forage competition between wild horses, livestock, and wildlife species exists throughout the proposed project area. The wild horses also make use of the previously manipulated landscapes from wildland fires to the northwest of the Proposed Action.

The wild horses will either travel to functional windmills pumping water in the area (for as long as they are running while livestock are in the area), or seeps and springs in the area with perennial water sources located at Duck Creek approximately five miles to the southwest, Yellow Creek approximately seven miles to the northeast, or to the Greasewood Gulch drainage approximately four to seven miles west and north of the Proposed Action. However, these wild horse bands will temporarily relocate from their home range in the Barcus Creek drainage to areas closer to the perennial water sources as the drier summer conditions warrant.

Environmental Consequences of the Proposed Action:

Direct and Indirect Effects: Implementation of the proposed project would primarily impact the removal of the existing vegetation and loss of forage and cover by surface-disturbing activities for the approximately 15 acres in the short term until interim reclamation is successfully completed in the long term. Wild horses could be disrupted by noise and fugitive dust associated with the Proposed Action's activities, particularly during the foaling season, but

it is believed they would make efforts to avoid the area during the active construction phase. For wild horses that would not avoid the project activities; there is the potential for wild horses to become trapped, should they fall into an open trench. Increased traffic in the project area could also result in young foals becoming dislocated from their mares if they are in the area. Generally, these impacts would be considered temporary, limited to the period during construction, as well as intermittent impacts from fugitive dust occurring when road ways would be in used after construction.

This proposed well location could affect the wild horse herd in the HMA; however, the Proposed Action is not expected to impact the herd population to drop to levels below the AML range of 135-235 wild horses. Impacts to wild horses from oil and gas development have not been widely studied or documented. Inferences regarding potential impacts to wild horses utilizing the portion of the HMA in the proposed project area are largely based on anecdotal information and observations of the effects of oil and gas activities on the herd, and on known impacts to other large mammals (e.g., mule deer and cattle) that are dependent upon similar habitats and also forage within the proposed project area.

Implementation of the proposed project could result in direct and indirect impacts to wild horses in the proposed project area. Surface-disturbing activities associated with the proposed well and their associated road and pipeline would result in the direct, initial loss of approximately 15 acres of habitat cover and forage in that portion of the HMA where the proposed project area is located. For wild horses that do not avoid development activities, cattle guards, if and where installed, could increase the potential for injuries to wild horses (e.g., hooves and legs caught in or through the brace assembly). There is also the potential for wild horses to become trapped should they fall into an open trench. This trench could be considered in a high use area by wild horses crossing back and forth between the drainage bottom in Main Barcus Creek and the old wildland fire scars up on the benches to the west. Further, increased traffic on the access road in the proposed project area could also increase the potential for harassment of and vehicle collisions with wild horses that utilize this area. The potential for increased traffic on the proposed project area roads could also result in young foals becoming dislocated from their mares.

Impacts to wild horses would likely be greatest if increased human presence associated with construction, drilling, and completion activities were to take place during the foaling period (March 1 through June 15) or during the next potential gather. As intensive development activities would be delayed for a specified 60-day period from within the window of March 1 through June 15, as outlined by the White River ROD/RMP, impacts during this sensitive time period would be reduced. Further, project activities may need to be adjusted around a wild horse gather, if scheduled during the same time as the gather.

Successful interim reclamation would be realized on about 10 to 12 acres of the estimated 15 acres of total initial surface disturbance. As such, residual surface disturbance in the portion of the HMA in the proposed project area would be approximately three to five acres. Additionally, successful final reclamation on the remaining acres would restore the lost wild horse habitat and forage in the long-term

Cumulative Effects: The Proposed Action would result in short-term displacement of resident wild horses and bands during project construction activities and pipeline installation. No long-term effect of the Proposed Action on distribution or normal drift/movement is expected to occur. Construction would be planned to take place during the recognized season between March 1 and June 15.

Environmental Consequences of the No Action Alternative:

Direct and Indirect Effects: There would be no effects to the wild horses within the HMA under the No Action Alternative.

Cumulative Effects: There would be no additional disturbances under the No Action Alternative within the HMA.

Mitigation:

1. Prior to surface-disturbing activities, WPX and/or their contractors should determine if wild horses are present in the vicinity of proposed project area. During the spring foaling period, between March 1 and June 15, if BLM determines wild horses are in the vicinity of proposed development, development activities may be delayed for a specified 60-day period from within the window of March 1 through June 15, as outlined by the White River ROD/RMP, to reduce impacts during this sensitive time period. Further, project activities may need to be adjusted around a wild horse gather if construction is scheduled during the same time as a gather operation. The lessee may also be required to perform special conservation measures within this area including: a) habitat improvement projects in adjacent areas, if development displaces wild horses from critical habitat; b) replacement of disturbed watering sites with an equal source of water having equal utility; and c) activity/improvements providing for unrestricted movement of wild horses between summer and winter ranges.

2. In the wild horse use area while the trenches are open, prior to the burial of the pipeline, the trench should be inspected daily for wild horses that may have become trapped should they have fallen into the trench. Ramps will be constructed along the trench which will allow wild horses the ability to exit the trench if they have fallen into the trench. If deceased wild horses are found in the trench the WRFO will be notified.

3. Should the Proposed Action occur simultaneous with a wild horse gather, all project-related traffic would need to be coordinated with the BLM and the contractor for the gather.

4. To minimize the incidents of young foals becoming dislocated from their mares, construction, drilling and receiving crews would be required to slow or stop when wild horses are encountered, allowing bands to move away at a pace slow enough so that the foals can keep pace and are not separated.

CULTURAL RESOURCES

Affected Environment: The proposed well pad and pipeline locations have been inventoried at the Class III (100 percent pedestrian) level (Davenport 2013 compliance dated 12/12/2013, Conner et al 2010 compliance dated 2/11/2011) which did not result in the identification of any surface manifestations of cultural resources. However, monitoring work in other parts of the Piceance Creek drainage has resulted in the identification of buried resources (Berry et al 2012 compliance dated 10/12/2012). The resources were deemed to be very important and were found at a variety of depths in the alluvial deposits.

Environmental Consequences of the Proposed Action:

Direct and Indirect Effects: The Proposed Action would not impact any known cultural resources. There is a small potential for undetected subsurface remains at the well pad location, which if impacted by construction could be seriously impacted or destroyed by construction. There is also an unknown potential for buried remains in the alluvium of Barcus Creek. Impacts to buried remains are difficult to quantify.

Cumulative Effects: If subsurface remains are present and damaged or destroyed by development it would constitute a long term, permanent, irreversible and irretrievable loss to the regional archaeological database.

Environmental Consequences of the No Action Alternative:

Direct and Indirect Effects: There would be no new construction or development related impacts to any known cultural resources under the No Action Alternative.

Cumulative Effects: Cumulative impacts to the archaeological database would likely occur at a very slow rate to any subsurface materials, should any be present. The loss of data would be at a very slow rate, related to the rate of soil erosional loss and would likely not represent an unacceptable loss since future inventory for development might identify the previously undetectable remains.

Mitigation:

1. The operator is responsible for informing all persons who are associated with the project that they will be subject to prosecution for knowingly disturbing archaeological sites or for collecting artifacts.

2. If any archaeological materials are discovered as a result of operations under this authorization, activity in the vicinity of the discovery will cease, and the BLM WRFO Archaeologist will be notified immediately. Work may not resume at that location until approved by the AO. The operator will make every effort to protect the site from further impacts including looting, erosion, or other human or natural damage until BLM determines a treatment approach, and the treatment is completed. Unless previously determined in treatment plans or agreements, BLM will evaluate the cultural resources and, in consultation with the State Historic Preservation Office (SHPO), select the appropriate mitigation option within 48 hours of the discovery. The operator, under guidance of the BLM, will implement the mitigation in a timely manner. The process will be fully documented in reports, site forms, maps, drawings, and photographs. The BLM will forward documentation to the SHPO

for review and concurrence.

3. Pursuant to 43 CFR 10.4(g), the operator must notify the AO, by telephone and 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), the operator must stop activities in the vicinity of the discovery and protect it for 30 days or until notified to proceed by the AO.

4. An archeological monitor will be required during all trenching in the alluvium of Barcus Creek.

PALEONTOLOGICAL RESOURCES

Affected Environment: The proposed well pad, access and well tie pipeline route are located in an area generally mapped as the Uintah Formation (Tweto 1979) which the BLM has categorized as a Potential Fossil Yield Classification (PFYC) 5. Formations that are classified as PFYC 5 formations are known to produce scientifically important fossil resources (c. Armstrong and Wolny 1989)

Environmental Consequences of the Proposed Action:

Direct and Indirect Effects: If it should become necessary to excavate into the underlying sedimentary rock to level the well pad, excavate the drill rig cellar, excavate any reserve/blooie/cuttings pits, construct the access road or bury any of the proposed well tie pipelines, there is a potential to impact scientifically important fossil resources. If interim reclamation is not completed in a timely, there is a potential for increased erosion, which could also result in a loss of fossil resources, especially the smaller and more fragile remains that might be present. Further, increased human presence and activity in the area could, potentially, result in an increase of unlawful collection of fossil resources.

Cumulative Effects: Any impacts to the fossil resources in the area, direct or indirect, would result in a long term, permanent, irreversible and irretrievable loss of scientific data from the regional paleontological database.

Environmental Consequences of the No Action Alternative:

Direct and Indirect Effects: Under the No Action Alternative, there would be no construction related impacts to any fossil resources in the proposed project area. Erosion, livestock trampling and possible fossil collection by visiting people could continue to result in a slow, difficult to measure rate.

Cumulative Effects: Any such losses from erosion, livestock tramping and fossil collection would be considered a long term, permanent, irreversible and irretrievable but at a rate that is not currently considered unacceptable.

Mitigation:

1. The operator is responsible for informing all persons who are associated with the project operations that they will be subject to prosecution for disturbing or collecting vertebrate or other scientifically important fossils, collecting large amounts of petrified wood (over 25lbs./day, up to 250lbs./year), or collecting fossils for commercial purposes on public lands.

2. If any paleontological resources are discovered as a result of operations under this authorization, the operator or any of his agents must stop work immediately at that site, immediately contact the BLM Paleontology Coordinator, and make every effort to protect the site from further impacts, including looting, erosion, or other human or natural damage. Work may not resume at that location until approved by the AO. The BLM or designated paleontologist will evaluate the discovery and take action to protect or remove the resource within 10 working days. Within 10 days, the operator will be allowed to continue construction through the site, or will be given the choice of either (a) following the Paleontology Coordinator's instructions for stabilizing the fossil resource in place and avoiding further disturbance to the fossil resource, or (b) following the Paleontology Coordinator's instructions for mitigating impacts to the fossil resource prior to continuing construction through the project area.

3. Any excavations into the underlying native sedimentary stone must be monitored by a permitted paleontologist. The monitoring paleontologist must be present before the start of excavations that may impact bedrock.

VISUAL RESOURCES

Affected Environment: Visual resources are the visible physical features of a landscape that convey scenic value. The BLM developed the Visual Resource Management system to identify and evaluate an area's scenic value. The visual resource inventory (VRI) process described in BLM Manual H-8410-1 establishes VRI classes, which are used to assess visual values for areas of the landscape. VRI classes II, III, and IV are determined by using a combination of three components: scenic quality, sensitivity level, and distance zones, with Class II having a higher level of value and Class IV having the least visual value. VRI Class I areas are assigned to special management areas, such as Wilderness Study Areas, which are the most valued landscapes. The VRI classes are the baseline from which environmental effects are measured. The Proposed Action is located in Visual Resource Inventory Class IV, which means this area is a lesser valued scenic landscape. The area of the landscape where the Proposed Action is located was placed into VRI Class IV as a result of a composite of the three above mentioned components. The area received a low Scenic Quality scoring of C (A, B, and C type rating). The Sensitivity Level rating as moderate value to the public, and the project is proposed to be located in a Distance Zone of Background.

The BLM also maintains four Visual Resource Management (VRM) classes used to describe the level of acceptable change allowable at a given location. Scenic values in the BLM White River Resource Area have been classified according to the Visual Resource Management (VRM) system into four Visual Resource Management Classes (I-IV), and corresponding VRM objectives were established in the 1997 White River ROD/RMP. VRM Class I are the most

restrictive, with VRM Class IV being the least restrictive for the amount of allowable change to occur on the landscape. The Proposed Action is located within a VRM Class III area. The objective of the VRM III classification is to partially retain the existing character of the landscape. The level of change to the characteristic landscape in VRM III areas should be moderate. Management activities may attract attention but should not dominate the view of the casual observer. Changes should repeat the basic elements found in the predominant natural features of the characteristic landscape.

The Proposed Action is located in the upper Barcus Creek drainage area. This panoramic landscape consists of vast gently sloping topography. Scattered stands of pinyon-juniper contrasting with the sage brush, mountain shrubs, and grasses provide texture to the landscape. The Proposed Action would primarily be viewed from the graveled and graded Rio Blanco County (RBC) Road 88 by oil and gas employees, local ranch operators, big game hunters, and other recreationalists.

Environmental Consequences of the Proposed Action:

Direct and Indirect Effects: The construction of the well pads, pipeline, and access road includes a total of approximately 15 acres of ground disturbance for the initial construction period. The exposed soils created by this construction activity and associated linear road and pipeline disturbance would create noticeable contrast to the landscape color and line characteristics from the construction start until interim reclamation. Upon completing interim reclamation, areas of exposed soils would be reduced in size and other formerly disturbed acres would then have some vegetation growing. This would reduce the amount of noticeable contrast and newly established vegetation would begin to blend with the surrounding landscape. In areas that had sparse and scattered pinyon-juniper woodlands removed during well pad construction, the visual impact of contrasting vegetation of grass and soils with adjacent woodlands may be somewhat noticeable for several decades but would likely slowly blend with the landscape over time. This may be noticeable along the southwestern portion of the well pad where areas of somewhat dense pinyon–juniper are proposed to be removed in order to construct this pad. The unnatural shape and color contrast of all above ground structures could cause moderate long term impacts to casual observers, if not mitigated. To reduce this impact, it is recommended that all permanent above ground structures (on-site for six months or longer) including tanks, associated production equipment, and any piping and valves be painted, Juniper Green according to the BLM Standard Environmental Chart CC-001: June 2008. This color should best serve to blend these structures with the scattered pinyon-juniper trees that surround the proposed well pad location. To those traveling RBC Road 88, the Proposed Action would be very noticeable during the construction period and less noticeable after interim reclamation has been completed. Overall, the implementation of the Proposed Action would not change the Visual Resource Inventory Class IV rating and would meet the Visual Resource Management class III objective of partially retaining the existing character of the landscape in this area.

Cumulative Effects: Combined with other existing, ongoing, and foreseeable oil and gas development and mining development activities in the area, the Proposed Action may begin to contribute to an increasingly impacted visual landscape.

Environmental Consequences of the No Action Alternative:

Direct and Indirect Effects: By not implementing the Proposed Action, there would be no new impacts to visual resources or casual observers in this area and there would be no changes to visual resource inventory class ratings.

Cumulative Effects: None have been identified as a result of this alternative.

Mitigation:

1. Paint and maintain the paint on all permanent above ground structures (on-site for six months or longer) including tanks, associated production equipment, and any piping and valves. Paint color is to be Juniper Green according to the BLM Standard Environmental Chart CC-001: June 2008.

HAZARDOUS OR SOLID WASTES

Affected Environment: There are no known hazardous or other solid wastes on the subject lands. No hazardous materials are known to have been used, stored, or disposed of at sites included in the project area. Most of the exploration and production wastes that would be generated by the Proposed Action would be exempt from the Resource Conservation and Recovery Act (RCRA) hazardous waste regulations (e.g., produced water, produced gas). However, the exemption would not mean that these wastes present no hazard to human health and the environment, nor would the exemption relieve the operator from corrective action to address releases of exempt wastes. Non-exempt wastes such as lubricants, fuels, caustics or acids, and other chemicals would be used during exploration and production activities and solid waste (e.g., human waste and garbage) would be generated during the proposed activities.

The operator has not specified the chemicals that would be used for drilling, completion, and hydraulic fracturing. Constituents found in hydraulic fracturing fluids may include salts, acids, petroleum hydrocarbons, and numerous other additives. The concentrations of these constituents are not well documented.

Environmental Consequences of the Proposed Action:

Direct and Indirect Effects: *:* The proposed activities may use regulated materials and would generate some solid and sanitary wastes. Most of the exploration and production wastes that would be generated by the Proposed Action would be exempt from the Resource Conservation and Recovery Act (RCRA) hazardous waste regulations (e.g., produced water, produced gas). However, the exemption would not mean that these wastes present no hazard to human health and the environment, nor would the exemption relieve the operator from corrective action to address releases of exempt wastes. Non-exempt wastes may include lubricants, fuels, caustics or acids, and other chemicals used during exploration and production activities and solid waste (e.g., human waste and garbage) generated during the proposed activities.

The operator has not specified the chemicals that would be used for drilling, completion, and hydraulic fracturing. Constituents found in hydraulic fracturing fluids may include salts, acids, petroleum hydrocarbons, and numerous other additives; a more comprehensive list of chemicals

typical of oil and gas exploration can be found in Appendix C of the WRFO Oil and Gas Development Draft Resource Management Plan Amendment and Environmental Impact Statement (BLM 2012).

The potential for harm to human health or the environment are presented by the risks associated with noise, spills of fuel, oil and/or hazardous substances used during oil and gas operations. Other accidents and mechanical breakdowns of machinery are also possible. Accidental releases associated with equipment failures, equipment maintenance and refueling, and storage of fuel, oil, other fluids, and chemicals could cause soil, surface water, and/or groundwater contamination.

While commercial preparations of fuels and lubricants proposed for use may contain hazardous constituents, they would be stored, used, transported and disposed of in a manner consistent with applicable laws such that generation of hazardous wastes is not anticipated. Solid wastes would be properly disposed of off-site at an approved facility.

Releases of produced water would present the greatest threat for widespread impacts due to large volumes stored throughout the life of the well. The high salinity of produced water may affect plant growth due to the high osmotic pressure of the soil solution, affecting existing vegetation adjacent to pads and greatly reducing the chance for successful reclamation. High salinity may also impact surface or ground water through run-off or leaching. The sodicity (i.e., excess sodium) of produced water causes deterioration of the soil structure, thereby increasing the potential for soil erosion and reducing the chances of reclamation success.

Substances used in the hydraulic fracturing process may be harmful to human health or the environment. However, freshwater-bearing formations and other resources suitable for human use or consumption are isolated from manmade materials used in oil and gas operations through the use and cementing of surface casing (43 CFR 3162.5-2(d)). Since not all chemicals that would be used on the site have been disclosed, specifically chemicals or other additives used for drilling, completion, and hydraulic fracturing operations, impacts to groundwater may occur. These chemicals and additives can also be present in the reserve pit after it is closed, as well as in drill cuttings within the cuttings pit. The BLM, in accordance with its Memorandum of Understanding with the Colorado Oil and Gas Conservation Commission (COGCC) (BLM 2009) would ensure that pits are closed in accordance with COGCC's 9-10 rules. With proper well completion, implementation of the mitigation measures and adherence to the conditions of approval (COAs), impacts to aquifers above the producing zone are unlikely, and the Proposed Action would not be expected to contribute incrementally to release of hazardous and solid waste in the watershed.

Cumulative Effects: Oil and gas exploration and development, and chemicals used for livestock and rangeland management are the principal sources of hazardous and solid wastes in the upper Fletcher Gulch Watershed. Down towards the confluence of Fletcher Gulch and the White River, agriculture and human habitation also contribute. Proper implementation of the surface use plans and adherence to the COAs would greatly reduce any contribution from the Proposed Action to cumulative adverse effects from hazardous and solid wastes on human health

and/or the environment. Nonetheless, the Proposed Action is expected to contribute incrementally to release of hazardous and solid waste in the watershed.

Environmental Consequences of the No Action Alternative:

Direct and Indirect Effects: No hazardous or other solid wastes would be generated under the No Action Alternative.

Cumulative Effects: The No Action Alternative would not contribute to cumulative effects from hazardous or solid wastes in the area of analysis.

Mitigation:

1. Comply with all Federal, State and/or local laws, rules and regulations, including but not limited to onshore orders and notices to lessees, addressing the emission of and/or the handling, use, and release of any substance that poses a risk of harm to human health or the environment. All spills or leakages of oil, gas, produced water, toxic liquids or waste materials, blowouts, fires, shall be reported by the operator in accordance with the regulations and as prescribed in applicable orders or notices.

2. Where required by law or regulation to develop a plan for the prevention of releases or the recovery of a release of any substance that poses a risk of harm to human health or the environment, provide a current copy of said plan to the BLM WRFO.

3. When drilling to set the surface casing, drilling fluid will be composed only of fresh water, bentonite, and/or a benign lost circulation material that does not pose a risk of harm to human health or the environment (e.g., cedar bark, shredded cane stalks, mineral fiber and hair, mica flakes, ground and sized limestone or marble, wood, nut hulls, corncobs, or cotton hulls).

4. All substances that pose a risk of harm to human health or the environment shall be stored in appropriate containers. Fluids that pose a risk of harm to human health or the environment, including but not limited to produced water shall be stored in appropriate containers and in secondary containment systems at 110 percent of the largest vessel's capacity. Secondary fluid containment systems, including but not limited to tank batteries shall be lined with a minimum 24 mil impermeable liner.

5. Construction sites and all facilities shall be maintained in a sanitary condition at all times; waste materials shall be disposed of promptly at an appropriate waste disposal site. "Waste" means all discarded matter including, but not limited to, human waste, trash, garbage, refuse, oil drums, petroleum products, ashes, and equipment.

6. As a reasonable and prudent lessee/operator in the oil and gas industry, acting in good faith, all lessees/operators and right-of-way holders will report all emissions or releases that may pose a risk of harm to human health or the environment, regardless of a substance's status as exempt or nonexempt and regardless of fault, to the BLM WRFO (970) 878-3800.

7. As a reasonable and prudent lessee/operator and/or right-of-way holder in the oil and gas industry, acting in good faith, all lessees/operators and right-of-way holders will provide for the immediate clean-up and testing of air, water (surface and/or ground) and soils contaminated by the emission or release of any substance that may pose a risk of harm to human health or the environment, regardless of that substance's status as exempt or non-exempt. Where the lessee/operator or right-of-way holder fails, refuses or neglects to provide for the immediate clean-up and testing of air, water (surface and/or ground) and soils contaminated by the emission or release of any quantity of a substance that poses a risk of harm to human health or the environment, the BLM WRFO may take measures to clean-up and test air, water (surface and/or ground) and soils at the lessee/operator's expense. Such action will not relieve the lessee/operator of any liability or responsibility.

8. Final abandonment of pipelines and flowlines will involve flushing and properly disposing of any materials remaining in the lines. Lines that are buried close to the surface that may become exposed due to water or wind erosion, soil movement, or anticipated subsequent use, must be removed. Deeply buried lines may remain in place unless otherwise directed by the Authorized Officer.

FIRE MANAGEMENT

Affected Environment: The Proposed Action lies within the B6 Yellow Creek fire management unit. This polygon consists of Wyoming big sagebrush and pinyon-juniper woodlands. A modified suppression strategy may be utilized where the potential to burn less than 200 acres of pinyon-juniper or sagebrush exists, whereas a full suppression response may be appropriate when the incident is capable of exceeding 200 acres. Local preparedness levels and proximity to infrastructure may limit fire management strategies to direct control by full suppression. The fire regime/condition class for this fire management polygon is currently at a two, or is land considered to have been moderately altered from its' historical fire return interval.

Environmental Consequences of the Proposed Action:

Direct and Indirect Effects: During a wildfire event, the primary objective is firefighter and public safety. While in the construction phase of the proposed project, the appropriate management response may be full suppression. Stock piled vegetation which is stored on site for future purposes creates jack pots of fuel which are susceptible to fire brands. A direct effect of the proposed project would be the temporary suspension of the use of naturally ignited fire to meet multiple resource management objectives. Once the project is complete, the man-made vegetation breaks would alter the behavior of wildfires in the area, and help to create areas that may be suitable for use as fire breaks to help control wildfires.

Cumulative Effects: A continued increase in natural gas drilling within the area may cause difficulties in full implementation of the Northwest Colorado Fire Program Area Fire Management Plan. Only when drilling operations decrease would fire and resource managers allow naturally ignited fire to create a vegetation mosaic representing various plant communities in different successional stages.

Environmental Consequences of the No Action Alternative:

Direct and Indirect Effects: No vegetation alteration or construction would occur under this alternative. Due to the known frequency of natural fire ignitions in the area of the proposed project, fire may again impact the site in 35 to 100 years. This natural return interval could return the site to a fire regime/condition class one.

Cumulative Effects: Without new oil and gas development and infrastructure, there would be less human related vegetation breaks which when combined with natural mosaic vegetation patterns have been used to contain fires in the past. This could lead to increased future fire suppression costs.

Mitigation:

1. When working on lands administered by the BLM WRFO, notify Craig Interagency Dispatch (970-826-5037) in the event of any fire.
    a) The reporting party will inform the dispatch center of fire location, size, status, smoke color, aspect, fuel type, and provide their contact information.
    b) The reporting party, or a representative of, should remain nearby, in a safe location, in order to make contact with incoming fire resources to expedite actions taken towards an appropriate management response.
    c) The applicant and contractors will not engage in any fire suppression activities outside the approved project area. Accidental ignitions caused by welding, cutting, grinding, etc. will be suppressed by the applicant only if employee safety is not endangered and if the fire can be safely contained using hand tools and portable hand pumps. If chemical fire extinguishers are used the applicant must notify incoming fire resources on extinguisher type and the location of use.
    d) Natural ignitions caused by lightning will be managed by Federal fire personnel. The use of heavy equipment for fire suppression is prohibited, unless authorized by the Field Office Manager.

RANGELAND MANAGEMENT

Affected Environment: The proposed well pads and access routes are located within the Barcus/Pinto pasture of the Yellow Creek grazing allotment (06030). Authorized livestock use (See Table 8) within this pasture occurs during spring, and fall/winter as shown in the table below.

Table 8. Authorized Livestock Use

Authorized use Within the Barcus-Pinto Pasture (06030)						
	Livestock		Grazing Period		%Public	Authorized Use
Pasture	Number	Kind	Begin	End	Land	(AUMs)
Yellow Creek Allotment (Barcus-Pinto Pasture)	240	*C	5/1	5/15	100	118
Yellow Creek Allotment (Barcus-Pinto Pasture)	340	C	5/16	6/30	100	514
Yellow Creek Allotment (Barcus-Pinto)	340	C	10/16	12/30	100	850

Environmental Consequences of the Proposed Action:

Direct and Indirect Effects: The Proposed Action would result in a loss of less than two Animal Unit Months (AUMs) of livestock forage. The loss of forage for the pipeline and the three acres of the pad that would go into interim reclamation would be considered short-term if revegetation is prompt and effective. The 3.6 acres of disturbance for the working surface of the well pad and the 0.69 acres for the access road would be considered long-term and would remain for the life of the project. Following successful final reclamation of disturbance associated with the well pad, road, and pipeline construction, it is expected that forage available to livestock would increase slightly due to conversion of this area from a shrub dominated site to a grass/forb site which would potentially have a higher forage production value for grazing animals. As the project is proposed, no rangeland improvement projects would be directly affected.

Cumulative Effects: The Proposed Action would not be expected to have any cumulative impacts to livestock grazing by itself because the size of the disturbance in relation to the entire grazing allotment is nominal; however, cumulative impacts from past, present and future oil and gas development within the allotment could force a reduction in authorized AUMs within the Yellow Creek allotment. These reductions in livestock use would be analyzed during the permit renewal process.

Environmental Consequences of the No Action Alternative:

Direct and Indirect Effects: The No Action Alternative would have not impacts to Rangeland Management in the project area.

Cumulative Effects: There would be no vegetation disturbing activities which would contribute to short term reduction of forage within the project area. There would be no potential for damage to range improvement projects as a result of the proposed project.

Mitigation: None

FLOODPLAINS, HYDROLOGY, AND WATER RIGHTS

Affected Environment: The access road uses County Road 88 along Barcus Creek and the East Barcus Creek. The new access road would cross the East Barcus Creek; the drainage area above this crossing is about four square miles. The East Barcus Creek is ephemeral and RBC 88 crosses the same branch about 400 feet upstream using a low water crossing. Much of the access road is in the 100-year floodplain for East Barcus Creek. Since East Barcus Creek is ephemeral, this portion of the valley bottom is only inundated during extreme storm events.

Environmental Consequences of the Proposed Action:

Direct and Indirect Effects: The Proposed Action is to install an 18 inch culvert on the crossing of the East Barcus Creek. It is likely that this culvert would fail during a 25 year storm event and could contribute to erosion during the 10 year event, due to creating a constriction on the flood plain. A better design would be to have an armored low-water crossing or a culvert sized for the 10 and 25 year storm events.

The surface use plan estimates the potential use of freshwater. Freshwater would come from established water rights nearby and trucked to the site for use; therefore, the Proposed Action is unlikely to impact water rights. Surface hydrology might be impacted by the undersized culvert proposed for East Barcus Creek.

Cumulative Effects: There is very little development in this drainage and no activities that would impact the natural function of the flood plain, impact water rights or change surface hydrology.

Environmental Consequences of the No Action Alternative:
Direct and Indirect Effects: No impacts to the floodplains, surface hydrology or existing water rights would occur since the access road, pipeline and pad would not be built.

Cumulative Effects: Cumulative effects would be similar to the Action Alternative.

Mitigation: The following should be applied as a Condition of Approval (COA):

1. The operator will submit a crossing design that adequately addresses potential peak flow events on East Barcus Creek for the new road segment. The operator must submit via sundry a crossing design that allows for the passage of the 10 year storm without erosion and the 25 year event without failure. If a culvert is proposed, the operator should estimate these peak methods using a suitable hydrologic method such as TR-55 and size the culverts accordingly. The proposed design should provide details about the method for armoring the crossing if a low water crossing is used. The crossing design should be approved by BLM and implemented before the drill rig occupies the pad.

REALTY AUTHORIZATIONS

Affected Environment: The natural gas pipeline requires a right-of-way (ROW) because the pipeline would be authorized to Bargath, a third party gathering company. The pipeline would tie in to the existing Barcus Creek natural gas pipeline ROW COC-70268 along County Road 88, which is authorized to Bargath. Since construction of the pipeline would require extra workspace and Bargath would not be using the access road as the temporary work area, a temporary use permit would be required.

Environmental Consequences of the Proposed Action:
Direct and Indirect Effects: The eight-inch natural gas pipeline (ROW COC-76577) to serve the BCU 31-25-199 well pad would be 5,600 feet long, 40 feet wide, and contain approximately 5.14 acres. The BCU 33-18-198 well pad would be used as a staging area during construction of the gas pipeline associated with the BCU 31-25-199 well pad. Additional 20 feet width along the length of the pipeline would be needed for construction of the pipelines. The temporary use permit (TUP COC-76577-01) for construction of the pipeline to serve the BCU 31-25-199 well pad would be 5,600 feet long and 20 feet wide plus the dimensions of the BCU 33-18-198 well pad (250 feet by 400 feet) for a total of approximately 4.87 acres. Damage to the facilities or

rights of existing ROW holders could occur if construction activities are not properly planned and other ROW facilities are not properly identified prior to construction. If accurate "as built" mapping is not provided to BLM, conflicts may develop in the future with other ROW holders.

Cumulative Effects: As the number of ROW holders in the project area increases, so would competition for suitable locations for facilities. Increased ROW densities would also lead to a higher probability of conflict between ROW users.

Environmental Consequences of the No Action Alternative:

Direct and Indirect Effects: Failure to authorize the proposed project would not result in any increased impacts to realty authorizations in the area.

Cumulative Effects: There would not be any cumulative effects from not authorizing the proposed project.

Mitigation:

1. The holder shall provide the BLM AO with data in a format compatible with the WRFO's ESRI ArcGIS Geographic Information System (GIS) to accurately locate and identify the ROW and all constructed infrastructure, (as-built maps) within 60 days of construction completion. Acceptable data formats are: (1) corrected global positioning system (GPS) files with sub-meter accuracy or better; (2) ESRI shapefiles or geodatabases; or at last resort, (3) AutoCAD .dwg or .dxf files. Option 2 is highly preferred. In ALL cases the data must be submitted in Universal Transverse Mercator (UTM) Zone 13N, NAD 83, in units of meters. Data may be submitted as: (1) an email attachment; or (2) on a standard compact disk (CD) in compressed (WinZip only) or uncompressed format. All data shall include metadata, for each submitted layer, that conforms to the Content Standards for Digital Geospatial Metadata from the Federal Geographic Data Committee standards. Questions should be directed to WRFO BLM GIS staff at (970) 878-3800.

2. Construction activity should take place entirely within the areas authorized in the ROW grant and temporary use permit.

3. At least 90 days prior to termination of the ROW, the holder shall contact the AO to arrange a joint inspection of the ROW. The inspection will result in the development of an acceptable termination and rehabilitation plan submitted by the holder. This plan shall include, but is not limited to, removal of facilities, drainage structures, and surface material (e.g., gravel or concrete), as well as final recontouring, spreading of topsoil, and seeding. The Authorized Officer must approve the plan in writing prior to the holder's commencement of any termination activities.

4. No surface disturbing activities shall take place on the subject right-of-way until the associated APD is approved. The holder will adhere to special stipulations in the Surface Use Program of the approved APD, relevant to any right-of-way facilities.

5. Boundary adjustments in Oil and Gas lease/unit COC60842 shall automatically amend this right-of-way to include that portion of the facility no longer contained within the above

described lease/unit COC60842. In the event of an automatic amendment to this right-of-way, the prior on-lease/unit conditions of approval of this facility will not be affected even though they would now apply to facilities outside of the lease/unit as a result of a boundary adjustment. Rental fees, if appropriate shall be recalculated based on the conditions of this grant and the regulations in effect at the time of an automatic amendment.

RECREATION

Affected Environment: The Proposed Action occurs within the White River Extensive Recreation Management Area (ERMA). The BLM custodially manages the ERMA to provide for unstructured recreation activities such as hunting, dispersed camping, hiking, horseback riding, wildlife viewing and off-highway vehicle use. The project site is located in the Recreation Opportunity Spectrum (ROS) classification area of Semi-Primitive Motorized. Areas within this classification are characterized by a largely natural appearance and are accessible by foot, horseback, bike or motor vehicle generally on native-surfaced roads or gravel. Interaction with other visitors is relatively low. There are minimal on-site controls and restrictions, and the area provides for a moderate probability of experiencing isolation, remoteness, and closeness to nature. The primary recreation activity in this area is upland big game hunting from late August through December of each year with peak use from mid-October through mid-November. The Proposed Action is located within the Colorado Parks and Wildlife (CPW) Game Management Unit (GMU) 22, which is a somewhat popular big game hunting area where hunters have good opportunities to pursue both mule deer and elk. There are 13 Special Recreation Permits (SRPs) for commercially outfitting and guiding for mountain lion hunting which are permitted for all BLM lands within the WRFO. There is one SRP for commercially outfitting and guiding for big game permitted on extensive public lands in this area.

Environmental Consequences of the Proposed Action:

Direct and Indirect Effects: By implementing the Proposed Action, there would be a direct disturbance of approximately 15 acres of public land currently available for dispersed recreation activities during the initial construction period. Some displacement of recreationalists may occur during construction, particularly to those seeking a more primitive-oriented backcountry recreation experience. Based on the proposal to drill two wells, well pad construction and drilling activities may coincide with some of the various big game hunting seasons (late August through December). This means there may be a disruption to the hunting experience in these localized settings during these activities. Because this proposal is located in an area within extensive public lands, it is likely that those seeking big game hunting opportunities in this area would be able to find similar hunting and camping opportunities on nearby public lands. After the construction period and once interim reclamation has been completed, the amount of ground disturbance would be reduced. Also, operational activities during the production phase would be much less disruptive to dispersed camping in the area and big game hunting.

Cumulative Effects: Combined with other existing, ongoing, and foreseeable oil and gas development and mining development activities in the area, the Proposed Action may begin to contribute to an increasingly impacted landscape with reduced recreational opportunities and undesired recreational experiences, and impacts recreational settings.

Environmental Consequences of the No Action Alternative:

Direct and Indirect Effects: Because the well pads, access road, and pipeline would not be constructed, there would be no new impacts to recreational opportunities and experiences as a result of this alternative.

Cumulative Effects: None identified as a result of this alternative.

Mitigation: None.

ACCESS AND TRANSPORTATION

Affected Environment: The primary access to the Proposed Action includes traveling west approximately 20 miles on State highway 64 from Meeker, CO to the junction with Rio Blanco County (RBC) Road 5 (Piceance Creek). Then travel approximately five miles south on RBC Road 5 to the junction with RBC Road 20. Then travel approximately three miles west on RBC Road 20 to the junction with RBC Roads 88 and 122. Then travel RBC 122 for approximately 14 miles to the Proposed Action. The roads closer to the Proposed Action are traveled primarily by oil and gas employees, local ranch operators, big game hunters, and other recreationalists. According to the White River ROD/RMP, motorized vehicle travel is restricted to the existing roads and trails from October 1 through April 30 of each year.

Environmental Consequences of the Proposed Action:

Direct and Indirect Effects: The Proposed Action would be expected to result in a minor incremental increase in traffic and potentially an increase travel times on the above described portions of routes, especially during the construction and drilling periods. These impacts are expected to be temporary in duration and the applicant has committed to maintaining routes used in conjunction with the Proposed Action to current conditions or better throughout the life of the proposed project. Because the proposed access road would be used only for accessing the well pad only, the Proposed Action would not be expected to increase access to public lands in this area. There would be potential for roads and routes to be damaged if construction activities associated with the Proposed Action occur when roads and routes are saturated. There is also potential for unauthorized motor vehicles to use the pipeline corridor as a transportation route to access public lands on the east end of the proposed pipeline. The eastern section of the pipeline corridor that leaves RBC Road 88 and crosses the drainage for approximately 200 yards has the potential to be used by unauthorized motor vehicles, which then may use the existing pipeline corridor to access public lands. It is unlikely that this type of unauthorized motor vehicle use would occur on the other portions of the proposed pipeline because it parallels the maintained RBC Road 88.

Cumulative Effects: None identified as a result of the Proposed Action.

Environmental Consequences of the No Action Alternative:

Direct and Indirect Effects: Because the well pads, access road, and pipeline would not be constructed, there would be no new impacts to the transportation system or public access as a result of this alternative.

Cumulative Effects: None identified as a result of this alternative.

Mitigation:

1. All construction activity shall cease when soils or roads surfaces become saturated to a depth of three inches unless approved by the Authorized Officer.

2. Place barriers across the pipeline corridor just east of where it leaves RBC Road 88 and where it terminates on the east end in a manner that prevents unauthorized motorized vehicle use along this section of the pipeline corridor.

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INTERDISCIPLINARY REVIEW:

Name	Title	Area of Responsibility	Date Signed
Bob Lange	Hydrologist	Air Quality; Surface and Ground Water Quality; Floodplains, Hydrology, and Water Rights; Soils	7/9/2014
Justina Thorsen	Seasonal Ecologist	Areas of Critical Environmental Concern; Special Status Plant Species	6/4/2014
Matthew Dupire	Rangeland Management Specialist	Forest Management	6/25/2014
Michael Selle	Archaeologist	Cultural Resources; Native American Religious Concerns; Paleontological Resources	5/21/2014
Matthew Dupire	Rangeland Management Specialist	Invasive, Non-Native Species; Vegetation; Rangeland Management	06/25/2014
Ed Hollowed	Wildlife Biologist	Migratory Birds; Special Status Animal Species; Terrestrial and Aquatic Wildlife; Wetlands and Riparian Zones	6/25/2014

Name	Title	Area of Responsibility	Date Signed
Ryan Snyder	Natural Resource Specialist	Hazardous or Solid Wastes	11/24/2014
Aaron Grimes	Outdoor Recreation Planner	Wilderness; Visual Resources; Access and Transportation; Recreation,	6/25/2014
Kyle Frary	Fire Management Specialist	Fire Management	6/30/2014
Paul Daggett	Mining Engineer	Geology and Minerals	6/25/2014
Stacey Burke	Realty Specialist	Realty	6/19/2014
Melissa J. Kindall	Range Technician	Wild Horse Management	6/6/2014
Ryan Snyder	Natural Resource Specialist	Project Lead – Document Preparer	11/24/2014
Joe David	Planning & Environmental Coordinator	NEPA Compliance	04/10/2015

ATTACHMENTS:

Figure 1: Map of the Project

Appendix A: Surface Use Plan of Operations

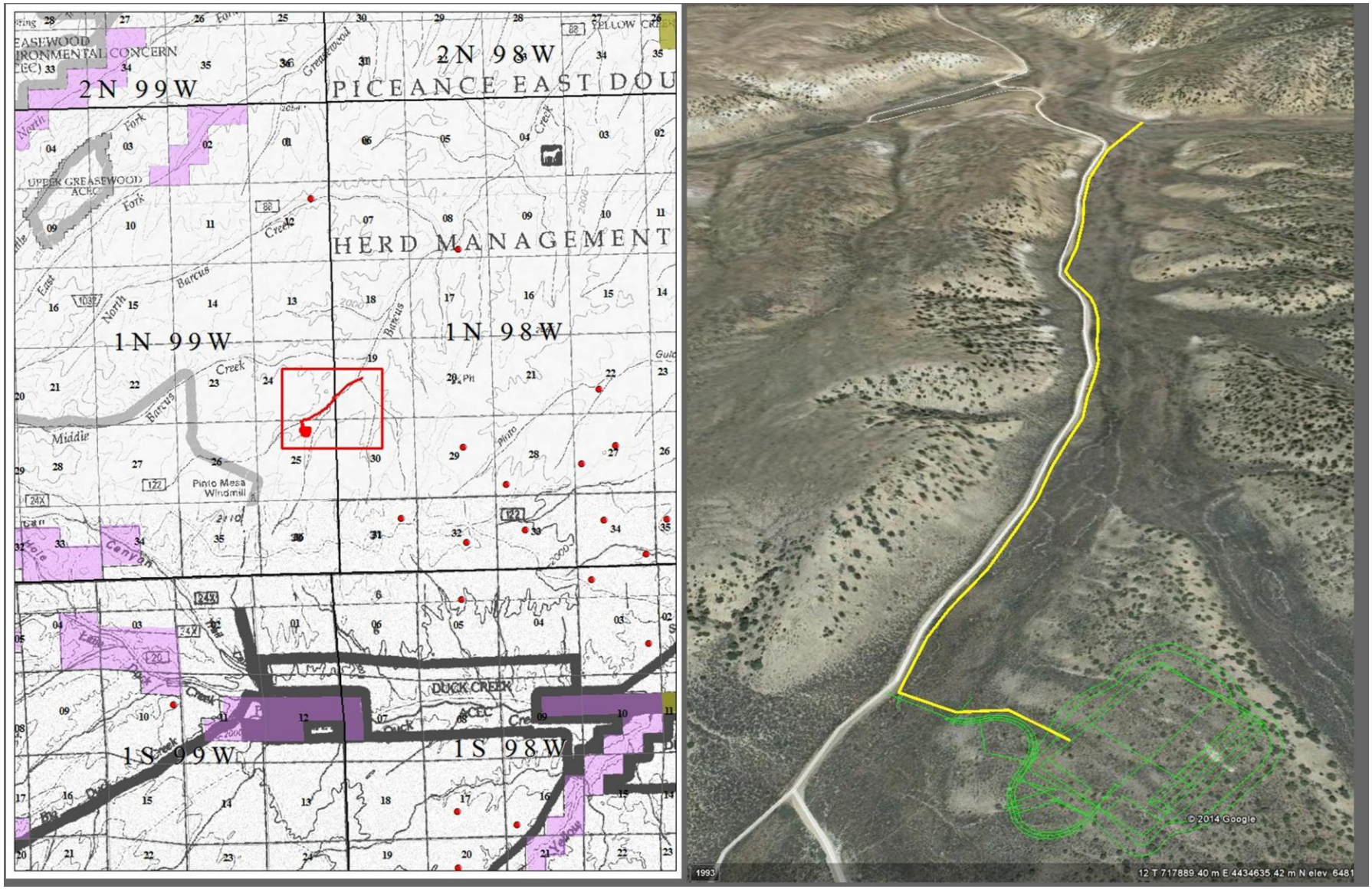

Figure 1. The image above illustrates the proposed geographic location for the BCU 31-25-199 well pad and the associated road and buried pipeline infrastructure (symbolized as a red polygon within the red box). Producing wells are symbolized as a red dots.

Appendix A:

Proposed Surface Use Plan of Operations for the BCU 31-25-199 well pad

WPX Energy
1058 County Road 215
P.O. Box 370
Parachute, Colorado 81635
(970) 285-9377

SURFACE USE PLAN OF OPERATIONS (SUPO)
4/14/14

BCU 31-25-199	
BCU 31-25-199	BCU 432-25-199
BCU 42-25-199	BCU 444-24-199

Green highlighted cells indicate wells that are being submitted at this time.
Proposed rig on date is dependent on scheduling - proposed rig off date 31 days from rig on date
proposed construction date 3/2/15
Proposed completions complete date dependent on schedule – proposed interim reclamation start date will be 6 months after last well is turned on to final sales.

Included with this SUPO: Plan of Develop Map
cc: WPX Energy Project File

Introduction

The SUPO identifies operations for the BCU 31-25-199 well pad. Included are construction and operations information and a POD (Plan of Development) map.

Proposed Action

WPX Energy is proposing to drill 2 wells on the new BCU 31-25-199 pad located on federal surface. Additional future wells may be planned on this pad.

Surface Use Plan of Operations

1. Existing Roads

A. **Legible Maps that show the well site & access routes** – Please see the attached POD map showing all existing roads.

B. **Plan for improvement and/or maintenance of existing roads** – Access roads and surface disturbing activities will conform to standards outlined in the 2008 version of BLM and USFS "Surface Operating Standards for Oil and Gas Exploration and Development – The Gold Book."

All non-county roads used to access the wells will be maintained in their current condition or better than before operations began. WPX Energy works in cooperation with the county and other operators regarding any maintenance along county roads with due diligence on dust control and any other maintenance required to access drilling pads. Water application may be implemented if necessary to minimize the amount of fugitive dust.

The Operator will be responsible for continuous inspection and maintenance of the access roads. The Operator will conform to a schedule of preventive maintenance, which at a minimum, provides for the following corrective measures on a biannual basis. (Problem areas will be corrected as needed.)

1. Road surface grading.
2. Relief ditch, culvert cleaning and cattle guard cleaning.
3. Erosion control measures for cut and fill slopes and all other disturbed areas.
4. Road closures in periods of excessive soil moisture to prevent rutting caused by vehicular traffic.
5. Road and slope stabilization measures as required. The road shall be maintained to the standards required for the construction of the road until final abandonment and rehabilitation takes place.

2. New or Reconstructed Access Roads

A. Proposed Access Route shown on a Map: A new access is being proposed off CR 88. See attached POD planning map.

B. Legible Map that identifies all permanent & temporary access roads proposed to be constructed: See attached POD planning map.

C. All existing and proposed road structures (culverts, bridges, low-water crossings, etc.) shown on a Map and/or Well Plat: See attached POD planning map.

PAD NAME	ACCESS ROUTE
BCU 31-25-199	New access off County Rd 88. See attached POD map.

D. Road (re)construction methods would include:

Road information:

- The recommended 90 degree safety & visibility with 100 ft width at intersection has been followed.
- Road Length – Please see table below for road length.
- Road Width (construction row) - Please see table below for road widths.
- Road width (travel width) – Please see table below for road widths.Maximum grade – Please see table below for maximum grade.
- Crown design, or In-slope/Out-slop design (Diagram and/or Narrative) - State and County 2% crown design have been met.
- Drainage and ditch design (Stormwater Mgmt BMP's, On-site and off-site Erosion Control) - Drainage and ditch designs are modeled at 2ft wide by 6 in deep. Refer to site specific Plat 5E stormwater management BMP map's attached. Onsite and offsite erosion control, re-vegetation of disturbed areas and source and storage of topsoil BMP's will be installed prior to, during and immediately following construction as practicable with consideration given to safety, access, and ground conditions at the time of construction. Due to the nature of the topography at various sites, any number of BMP combinations may be utilized at any phase of the project. Constant efforts will be employed to limit the extent of vegetative disturbance at the time of soil exposure during all construction activities and structural BMP implementation.
- Re-vegetation of Disturbed Areas – see above bullet.
- Location/Size of road structures (culverts, etc) - See attached POD planning map. Two culverts will be installed. One at the entrance off of CR 88 and another ¾ of the way to the pad. No fence cuts, cattle-guards and/or turnouts will be needed – See below table.
- Major cuts and fills (>5ft) – Major cuts and fills will be < 5 ft.
- Storage of topsoil – see seventh bullet as well as road interim reclamation below.
- Type of surfacing materials that will be used (if required) – will be gravel road base.

Pad Name	New Road Length	New Road Width (Const ROW)	New Road Width (Travel)	Maximum Grade	Fence/Cattle-guards/turnouts	Major cut/fills
BCU 31-25-199	1,000ft	30ft	25ft	10%	NA	NA

Road interim reclamation – Standard road interim reclamation would be to windrow topsoil either parallel to the road or along the low side of the road. Road construction is approximately two weeks. The topsoil would then be brought back up against the slope and then dressed/seeded. Issues found during our annual noxious weed monitoring spray program will be addressed with a site specific treatment.

Road final reclamation - The long term objective is to establish a self-perpetuating plant community that would be compatible and capable of supporting the pre-disturbance land use. The rate of application of the seed mix is listed in pounds of pure live seed (PLS)/acre. The seed will be certified and there will be no primary or secondary noxious weeds in the seed mixture. The operator shall notify the Authorized Officer 24 hours prior to seeding and shall provide evidence of certification of the above seed mix to the Authorized Officer.

All compacted portions of the pad, road, and pipeline route will be ripped to a depth of 18 inches unless located in solid rock. Prior to seeding, stockpiled topsoil (stripped surface material) will be spread to a uniform depth that will allow the establishment of desirable vegetation. All unused disturbed areas will be seeded within appropriate seeding windows and acceptable BLM timeframes unless a change is requested by the operator and approved by the Authorized Officer. If the seed bed has begun to crust over or seal, the seed bed will be prepared by disking or some other mechanical means sufficient to allow penetration of the seed into the soil. In addition, the broadcast seed should be covered by using a harrow, drag bar, or chain.

If off-site construction materials are needed, they will be purchased from a supplier having a permitted source of the materials, and WPX Energy will provide to BLM the quarter-quarter, Section, Township and Range location information of the source of these materials, as well as the type of materials used.

Please refer to section 1 (Existing Roads) for maintenance plans and conformance standards.

3. *Location of Existing Wells*

One Mile Radius for identification of all known wells (regardless of well status) within a one-mile radius of pad. See plat 5B.

4. Location of Existing and/or Proposed Production Facilities

A. Map or Diagram of all anticipated production facilities and lines likely to be installed if the well is a producer: See attached Production Equipment Detail Map. This map details where the equipment is located on pad, the type of equipment, the number of flowlines and the route that the flowlines take from the well heads to the equipment.

B. Map must identify and differentiate b/t which lines are existing and those that are proposed-See POD Map – Gas pipelines will be authorized to Bargath. Water will be on-unit water only. The table below details the length of the proposed line.

Pad Name	Gas Line	Water Line(s)	Tie In point	Length of route	Within ROW	Staging Area*	Line/Fittings Storage*
BCU 31-25-199	5,600ft	5,600ft	Into Williams existing gas line infrastructure. The water line will tie into WPX existing water infrastructure	5,600ft	60ft	BCU 33-18-198	BCU 33-18-198

*These areas are needed for the pipeline company to stage their equipment during pipeline installation and will not require any surface disturbance on the pads requested for staging areas.

5. Location and Types of Water Supply

Drilling

For drilling fresh water will be pumped under valid existing permits and transported by truck over privately owned and county roads from one of several sources: 1) surface water at the Mautz Ranch in SWNE19-2S-98W utilizing County Roads 86, 83, 31 and 24, and BLM road, 2) surface water at Mantle's Ranch in NWSE 26-2S-97W utilizing County Roads 85, 86, 83, 31 and 24, and BLM road, and 3) surface water at Mantle's Ranch in NWNW 33-1S-97W utilizing Rio Blanco County #5, and County Roads 24, 83, 31 and BLM road. For information purposes, typical *estimated* fresh water volumes needed for drilling operations would be approximately 8000 bbls. *Estimated* water volumes needed for dust control as needed during time of drilling

and all other operational phases, construction in this case, would be approximately 5000 bbls. A total estimated amount of fresh water to be used is 13,000 bbls.

To protect the water quality of our primary two water source locations Black Sulphur Creek and Piceance Creek all water haul trucks working for WPX have a backflow preventer (check valve) available and in use on all trucks pulling from fresh water sources while servicing the drilling rig. At each specific water source we have constructed a manifold which has a backflow preventer permanently implemented that all trucks must utilize while pulling water from those specific fresh water sources.

Access route is as follows:

Pad Name	Directions to pad
BCU 31-25-199	From the intersection of State Hwy 64 & Rio Blanco Cty Rd 5 proceed southerly along Cty Rd 5 ±14.5 miles to the intersection of cty rd 24(mile marker 26.8). Proceed westerly along Cty Rd 24 miles ±10.4 miles to the intersection with Cty rd 24x, Proceed right in a northerly direction ±6.0 miles to an intersection with a dirt/gravel road, Proceed right in a northerly direction ±0.1 miles to the intersection with Cty Rd 88, proceed left in a northerly direction ±0.2 miles to the BCU 31-25-199 pad.

Water transportation method will be to truck fresh water.

No new roads would be constructed for the exclusive purpose of transporting water to the site.

Completions

Estimated recycled water volumes required for completion operations (including fracing) would be up to approximately 70,000 bbls per well. Some wells vary due to loss circulation and some do not require this high of volume of fluid. WPX Energy always endeavors to recycle produced water from other wells within pad location area for all completion work.

Pad Name	Completions Plan
BCU 31-25-199	Frac on pad after the drilling rig leaves. Water will be trucked to the pad.

6. Source of Construction Materials

Surface and subsoil materials within the proposed construction areas will be used. Additional gravel or pit lining material (if required) will be obtained from either Connell Resources gravel pit located in the S ½ of Section 6 T6N-R90W or LaFarge Mamm Creek gravel pit located in the Section 16 T6S-R93W. (10 miles east of I-70 in Rifle).

Additional materials are not needed for construction of this pad.

No construction materials will be taken from Federal lands without prior approval from the appropriate Surface Management Agency.

7. Methods for Handling Waste Disposal

- Chemical toilets or an enclosed sewer system will be used. Contents will be hauled off by Mountain West and/or Down Valley companies.
- All garbage and trash will be stored in a totally enclosed trash container and hauled off by Bolton Construction and ultimately be deposited in an approved sanitary landfill within one week following termination of drilling operations. No garbage or trash will be disposed of in cuttings trench.
- Used oil is put back in its original drum and stored on location within secondary containment. Contracted recyclers would remove the oil from the drums for recycling at an authorized facility.
- The well site and access road will be kept free of trash and debris at all times. Wastes meeting criteria established in the U.S. Environmental Protection Agency's "Exemption of Oil and Gas Exploration and Production Wastes from Federal Hazardous Waste Regulations (EPA Publication Number 530-I-01-004) (2002), including drilling cuttings, produced water, frac water, etc. will be managed in accordance with Federal (BLM) and COGCC regulations. Non-E&P wastes will be managed in accordance with EPA and CDPHE regulations. Pit closures will be conducted in accordance with applicable COGCC rules and regulations.

Drill cuttings –Drill cuttings will be stored and buried in the cuttings trench. Actual construction of trench will be based on volume needed. See plat 2.

Pad Name	Approx. Cubic yards of cuttings to be generated	Approx. capacity of cuttings trench on pad	Location of trench on pad – also shown on plat 2.
BCU 31-25-199	1000 cy	6500 cy	On southern edge of the pad

The cuttings trench cu. yds. of cuttings information is also identified on plat 2. All cuttings are rinsed with recyclable fresh water prior to placing them into the trench. The trench will be constructed to disallow water input and under no circumstances will it be allowed to leak or be cut to drain. The trench will not be located on a natural drainage. Waste or discharge of any kind will not be allowed to enter any drainage. WPX will extract external liquids throughout the life of the pit. Additional options to prevent water input into the trench would be to construct a berm or ditch around the perimeter as not to allow storm water fluids to drain into the trench. In those cases where emergencies such as weather conditions, safety concerns, or operational constraints exist, cuttings may be temporarily stored at another location in accordance with COGCC waste management and CDPHE storm water regulations. WPX would gain prior approval from BLM before moving cuttings to another location in the event of an emergency. Unlined trenches will be built with compacted sub-soil at the base of the pit. During interim reclamation three foot of clean soil will be put over the pit surface.

- Once the cuttings arrive on surface during the drilling process, they are transported to a drying shaker, which rinses the cuttings w/ recyclable fresh water. The cuttings then fall into a catch bin. At this point, depending on how wet the cuttings are, fill dirt, Cut/Dry, Sawdust, or EcoSponge ™or other organics are mixed in to begin the drying process.
- BCU 31-25-199 cuttings trench will be constructed on the southern edge of the pad as shown on Plat 2.
- Bury all cuttings on well pad in trench and cover with spoils from pad construction once the drilling rig departs. Truck traffic would be dramatically reduced. When large stockpiles are ready to go, depending on weather and road condition, loads are transported which averages 15 loads per day with 10 trucks. By burying cuttings it would eliminate trucking for approximately 25 round trips per well from the roadways.
- All cuttings will be tested prior to burial. Testing results or the COGCC pit closure approval will be submitted to BLM prior to burial. If cuttings do not pass COGCC testing requirements than subsequent remediation will have to take place before burial. The methods and areas that will be needed will be submitted via sundry for prior approval by BLM.
- Allow excess cement from surface casing jobs to be buried in same trench once cement is set.
- No liquid will be buried in any cuttings trenches.
- All permits, sundry's etc to be in place prior to beginning this process.
- Certificate of Disposal obtained from Rio Blanco County for each pad, if county requires.

WPX would resubmit a revised management/disposal plan in the event cuttings exceed Table 910-1 concentration levels and need additional treatment.

Frac Sand - Frac sand will be managed in accordance with COGCC regulations. Frac sand is managed on the pad surface within the pad berm perimeter. The volume of frac sand that comes back during flowback operations is unknown until the actual operations occur. The location of this management area is usually adjacent to the cuttings trench but can depend on equipment on pad, weather conditions, and travel paths

that need to be kept open. COGCC does not require a liner to be placed under the frac sand. Any frac sand that cannot be safely contained on the pad surface, within bermed perimeter, will be hauled off to one of the approved 3rd party disposal sites listed in #4 below. Frac sand will be blended with clean soil and screened for total petroleum hydrocarbon to ensure compliance with the COGCC Table 910-1 standards before including in the re-contouring of the pad.

Disposal of drilling fluids - Drilling fluids will be stored in tanks on location. The tanks and drilling fluids are hauled off of location once drilling is complete. Drilling fluids are reused between rigs, but, if the fluids have elevated Chlorides, high solids or not recyclable, the fluids will be hauled to the Parachute Centralized E&P Waste Facility. Ultimately, the solids and dewatered water generated at this dewatering plant are hauled to an approved disposal facilities that are permitted to accept soils with hydrocarbon contaminants. The dewatered water is hauled off by a third party contractor, RNI. The dewatered solids are either hauled to the pad at which they originated from (if there is room in the cuttings trench) and tested with the contents of the trench to ensure COGCC Table 910-1 standards are met before burial, the Wray Gulch landfill, or to ECDC Environmental. Please see list of approved 3rd party disposal sites in #4 below.

Disposal of produced oil – As these wells will not be producers, we do not expect produced oil. However, the following description is general for our production wells. Production fluids (oil and water) are separated through production units (separators). Fluids are then dumped into production tanks from separators using pressure off units and automatic valves. Fluids are monitored and tracked off each individual pad and well. Oil is gauged by traditional tank strapping methods and sold from the tank battery at the pad where the marketer for the oil takes custody of the oil.

Disposal of produced water - Production fluids (oil and water) are separated through production units (separators). Fluids are then dumped into production tanks from separators using pressure off units and automatic valves. Tanks will be placed in a lined, steel containment ring and hold 1.5 times the capacity of the largest tank or tanks. Fluids are monitored and tracked off each individual pad and well. Water is also gauged by traditional tank strapping and hauled to numerous points depending on if water is needed for completion operations.

1. Produced water will be pumped via water lines to the Mautz Ranch multi-well pit (in bullet point #3 below) or the NE Ryan Gulch pit where the fluid can be biocided and filtered prior to pumping through underground water lines to a pad that is in the process of being fraced. Water can also be trucked back out if no lines are present to that pit (this option is secondary as pumping is preferred to reduce truck traffic and costs).

2. Produced water that is not needed for completions will be:
    a. Injected into one of WPX Energy's salt water injection s (See list of WPX's Class II UIC wells in #4 below) or
    b. Excess water may be hauled to our approved Parachute Centralized E&P Waste Facility (T6S-R96W-Sec. 36) or Rulison Centralized E&P Waste Facility (T6S-R94W-Sec.20) where it will be further cleaned and recycled for completions or injected into one of WPX approved Class 2 UIC Wells (see list of approved Class II UIC wells in #4 below) or
    c. Left over water that cannot be injected into WPX Energy owned and operated Class II UIC wells will be hauled to approved third party disposal sites (See List of approved disposal sites in #4 below).

3. Mautz Ranch multi-well pit – This is a central storage area on private property that will allow us to deliver water more efficient and reduce truck traffic to our central locations. SF-299's for pipelines to this facility have been submitted to BLM. Once these are approved and installed, water can then be pumped to and from this site.

4. WPX Energy operates Class II UIC Disposal wells throughout the Piceance Asset to properly manage excess water volumes. The wells are operated within the Guidelines of the State and Federal controling agencies. Below is a list of current WPX Class II UIC wells*:

    Fed 299-27-5 (Fed surface)
    Fed 299-27-6 (Fed surface)
    Fed 299-26-2 (Fed surface
    RG 41-16-397 (Fed surface)
    Fed 299-23-2 (Fed surface – pending UIC permit)
    Fed 299-23-3 (Fed surface – pending UIC permit)

RWF 623-21 (private surface)
DOE 2-W-29 (Fed surface – pending UIC permit)
RWF 434-21 (private surface)
RMV 215-21 (private surface)
KP 9-12D (private surface)
GM 14-36 (private surface)
GM 523-36 (private surface)
GM 923-1D (private surface)
GM 931-1D (private surface)
GM 943-1D (private surface)
GM 239-36. (private surface)
*Please note that all approved UIC permits are on file in the WRVFO.

Below is a list of current approved 3rd party disposal sites:

Solids:
ECDC Environmental (East Carbon, UT)
Wray Gulch Landfill
Green Leaf Facility (DeBeque, CO)

Liquids:
RNI Rangely Disposal
RNI Piceance Creek Disposal
Danish Flats Environmental (Cisco, UT)
Green River (Green River, UT)
Westwater Farms (Westwater, UT)
Great Divide (Maybell, CO)
Green Leaf Facility (DeBeque, CO)

Secondary containment(s) will be installed/constructed, inspected and maintained in accordance with the Environmental Protection Agency's Spill Prevention, Control and Countermeasure (SPCC) regulation (40 CFR 112.7 5c & Surface Operating Standard for Oil and Gas Exploration and Development, Fourth Edition – Revised 2007).

8. Ancillary Facilities

The ancillary recycling point for drilling, completions and production is the existing dewatering plant set up at the existing Parachute Centralized E&P Waste Facility (T6S-R96W-Sec. 36) for the recycling of drilling, completions and production fluids. Completions water will be from the NE Ryan Gulch Recycling Pit . Also, Class II UIC wells and approved 3rd party disposal locations are listed in section 7 under #4. See Ancillary Facilities Map 5F.

9. Wellsite Layout

The below plats are included in the APD packages.

Plat #1 of the attached APD(s) for the Well Location, (surveyed, designed, and certified by license surveyor/engineer)
Plat #2 of the attached APD(s) for the Construction Layout.(surveyed, designed, and certified by license surveyor/engineer)
Plat #3 of the attached APD(s) for the Construction Layout Cross Sections, (surveyed, designed, and certified by license surveyor/engineer)
Plat #4 of the attached APD(s) for the Drill Rig Layout.
Plat #5 of the attached APD(s) for Access Road Map (with existing access – no new access is needed.)
Plat #5B of the attached APD(s) for One Mile Radius
Plat #5C of the attached APD(s) for Hydrology Map
Plat #5D of the attached APD(s) for Reference Area Map
Plat #5F of the attached APD(s) for Ancillary Facilities Map
Plat#6 of the attached APD(s) for the Location (Current Footages).
Plat #7 of the attached APD(s) for the Reclaimed Pad & Production Equipment. – contains disturbance area acreage.
Plan of Development (CPOD) Map
Location of Existing Wells - COGCC Map
Construction Storm Water BMP Map
Interim Storm water BMP Map

WPX Energy GIS department will provide the *designated Natural Resource* Specialist and Richard Brooks/Meeker BLM with geospatial data in a format compatible with the WRFO's ESRI arcGIS Geographic Information System (GIS) (e.g., GIS point and polygon features). These data will be used to accurately locate

and identify all geographic as-built (i.e., constructed and design implemented) features associated with these projects and included in the Application for Permit to Drill (APD) or Sundry Notice (SN), as appropriate.

- These data shall be submitted within 60 days of construction completion. If unable to do so WPX will notify the designate Natural Resource Specialist via email or by phone within the above mentioned time frame and provide justification supporting an extension for submittal.
- GIS polygon features may include, but are not limited to: full well pad footprints (including all stormwater and design features), constructed access roads/widths, existing roads that were upgraded/widths, and pipeline corridors.
- Geospatial data will be supplied as GPS files with sub-meter accuracy or better and ESRI shapefiles or geodatabases. Geospatial data will be submitted in UTM Zone 13N, NAD 83, in units of meters. Information will be electronically submitted if possible. If unable to submit electronically a compact disk will be mailed to:

  BLM, White River Field Office
  Attn: Natural Resource Specialist
  220 East Market Street
  Meeker, CO 81641
- All data will include metadata, for each submitted layer, that conforms to the *Content Standards for Digital Geospatial Metdata* from the Federal Geographic Data Committee standards.

WPX will submit, via sundry, an updated GIS "As-Built" data to the designated Natural Resource Specialist within 7 calendar days if the location or orientation of geographic features associated with the Proposed Action changes.

The certified plats have been submitted at a 1"=100" scale, per a previous agreement with the WRFO to fit maps on 8.5x11' paper as long as they are legible. However, in the future, maps will be submitted at no less than 1"=50' if necessary to make them legible.

Production Pad (including dimension)			
Pad Name	**Pad Size without stormwater features**	**Production area size**	**Total disturbance (within existing disturbance- includes stormwater BMPs)**
BCU 31-25-199	**450' x 350'**	**Tanks – 60'x120'; Separators – 30'x150'**	**±6.58ac**

Pad cuts & fills	
Pad Name	**Pad cuts & fills, ft.**
BCU 31-25-199	**Largest cut: 16.7 Largest fill: 14.7**

Reserve pit location - NA

Access road entry points and approximate location with respect to topographic features	
Pad Name	**Description**
BCU 31-25-199	Access road comes in at the cut/fill line (approx. 0.6 fill)

*See plat 5 for location map and directions.

Proposed drill rig w/anchor locations – See plat 4.

Dikes & Ditches constructed (Stormwater Mgmt BMPs). Diagram must show maximum extent of disturbance – See plat 5E for Stormwater BMPs. The acreage of disturbance is listing in the below table under section 13 and includes stormwater BMPs.

Topsoil and spoils material stockpile locations; Include method of topsoil	
Pad Name	**Topsoil/spoils location**
BCU 31-25-199	North and South side of pad

*See plat 2 - Cross-section diagrams of drill pad – See plat 3.

10. Plans for Surface Reclamation

The sites are anticipated to be active for up to 35 years, meaning final reclamation could occur for each pad between the years 2049 & 2051.

Reclamation/reseeding will comply with Federal (BLM) and state (COGCC) regulations. On BLM lands, WPX Energy will comply with seeding requirements as established by the appropriate BLM office.

Plan for surface reclamation - The long term objective is to establish a self-perpetuating plant community that is compatible with and capable of supporting the pre-disturbance land use.

Plan addresses Interim Reclamation(during production) –

All areas of surface disturbance no longer needed for production would be reclaimed after the permitted wells are drills. Interim reclamation on a pad will be completed 6 months, weather permitting, after the wells are completed on the pad. If the cuttings on the pad do not pass COGCC regulations a sundry will be submitted to BLM with this information and a request to extend the interim reclamation time frame and/or a cuttings treatment plan with an expected date of completion.

All permanent above-ground structures not subject to safety considerations will be painted a flat, non-reflective, earth-tone color to match the standard environment from safety purposes. Immediately upon completion of drilling, the location and surrounding area will be cleared of all remaining debris, materials, trash and junk not required for production, and hauled to the nearest legal landfill. *Any significant areas of disturbance caused by temporary surface lines that are identified by BLM and/or landowner at time of removal will have vegetation or soils reclaimed to pre-disturbance conditions.*

Diagram of Interim Reclamation Plans – See plat 7.

Configuration of Reshaped Topography - The slopes of the pad would be re-contoured to fit the natural topography, but a working area would be maintained around each well head and production equipment.

Drainage Systems (Stormwater Mgt BMPs) – No storm water BMPs are proposed at this time for the interim reclaimed pad. However, WPX will remain in compliance with CDPHE regulations and once re-contouring is complete and storm water management BMPs are found to be needed, an as-built drawing showing these BMPs will be available upon request.

Proposals for Pit/Sump Closures (if applicable) - The process of closing the cuttings trench will begin within six months of all drilled wells on the pad being completed. The trench will be closed in time to complete interim reclamation by the 6 mos. timeframe (following completions) required by the Onshore Order. If the cuttings do not pass COGCC Table 910-1 specifications then the trench will remain open until the cuttings do pass. If the interim reclamation completion timeframe needs to be extended due to the cuttings not passing Table 910-1 specs then prior approval will be obtained from BLM before extending the interim reclamation completion date.

Redistribution of Topsoil - After the well pad has been constructed, drilling and completions are completed, with production facilities in operation, the site will be graded to reduce cut and fill slopes to minimize the overall size of the well pad. Three foot of clean soil (non-cuttings soil) will be put over the trench surface in accordance with COGCC regulations. Where practicable, the topsoil stockpile will be spread onto the re-contoured surface. Any remaining topsoil will be seeded to maintain stabilization and continued nutrient cycling. The well pad will be maintained as necessary to assist in site stabilization during interim reclamation. Slopes around the production facilities, which are unable to be re-contoured for interim reclamation will continue to be stabilized with structural BMPs, and will be seeded as grade allows. All compacted portions of the pad, road, and pipeline route not needed for production will be ripped to a depth of 18 inches unless in solid rock. Prior to seeding, stockpiled topsoil (stripped surface material) will be spread to a uniform depth that will allow the establishment of desirable vegetation. Topsoil would be uniformly re-distributed over all disturbed areas prior to seeding.

Segregation of spoil materials (stockpiles) - - Different soil horizons will be segregated. The topsoil horizon or the top six (6) inches, whichever is deeper, will be separated and stored in locations noted on construction drawings. Other soil horizons will be segregated based upon noted changes in physical characteristics such as organic content, color, texture, density or consistency. This practice will ensure that the soil is applied to the appropriate horizon from which it was taken from initially.

Soil Treatment - Soil samples will be collected and analyzed to determine the need to add amendments. Amendments will be utilized, as applicable, upon receiving prior approval from the BLM.

Seeding/Re-vegetation - Reclamation/reseeding will comply with Federal (BLM) and state (COGCC) regulations. On BLM lands, WPX Energy will comply with seeding requirements as established by the appropriate BLM office. The topsoil stockpile will be stabilized with a BLM approved seed mix, until it is redistributed for interim reclamation. All unused disturbed areas will be seeded within 24 hours after seed bed preparation unless a change is requested by the operator and approved by the Authorized Officer. If the seed bed has begun to crust over or seal at the time the soil is to be redistributed for interim reclamation, the seed bed will be prepared by disking or some other mechanical means sufficient to allow penetration of the seed into the soil. In addition, the broadcast seed should be covered by using a harrow, drag bar, or chain. The rate of application of the seed mix is listed in pounds of pure live seed (PLS)/acre. The seed will be certified and there will be no primary or secondary noxious weeds in the seed mixture. The operator shall notify the Authorized Officer 24 hours prior to seeding and shall provide evidence of certification of the above seed mix to the Authorized Officer. If at all possible topsoil will not be allowed to crust over.

Weed Control - Noxious weeds which may be introduced due to soil disturbance and reclamation will be controlled by methods to be approved by the Authorized Officer. The Pesticide Use Permit shall be on record with the BLM for treatment of noxious weeds.

Practices necessary to reclaim all disturbed surfaces, including access roads & pipelines - Topsoil would be brought back against the slope and dressed/seeded. Issues found during our annual noxious weed monitoring spray program will be addressed with a site specific treatment.

Plan addresses Final Reclamation (Abandonment) –

Final reclamation will include the restoration of functional pre-disturbance hydrology and well as a stable and self-sustaining plant community consistent with the surrounding landscape. Upon completion of approved plugging, a regulation marker will be erected in accordance with 43 CFR 3162.6. The marker will be constructed after contouring. The top of the marker will be closed or capped and the following minimum information will be permanently placed on the marker with a plate, cap or beaded-on with a welding torch: "Fed" or "Ind", as applicable; "well number, location by quarter, quarter section, township and range"; and "lease number". Unless an agreement is made with the landowner to keep the road and/or pad in the place, the disturbed areas surrounding the well location, including the access road and pipeline will be completely reclaimed to pre-disturbance conditions and to closely resemble features of the surrounding natural landscape.

Configuration of Reshaped Topography - After all wells have been plugged and abandoned, and production facilities are removed, the well pad will be graded to restore pre-disturbance contours. Final grading of back-filled and cut slopes will be done to prevent erosion and encourage establishment of vegetation. Existing drainages will be re-established. The Construction layout cross section supplied in site specific APDs will, in reference to the proposed cut and fill of the pad, be restored to pre-disturbance conditions at time of final reclamation.

Drainage Systems (Stormwater Mgt BMPs) - A site specific Hydrology map will be supplied with each APD to reference existing pre-disturbance hydrology. The pad would be restored to pre-disturbance conditions at the time of final reclamation. Existing drainage would be re-established. Storm water inspections will continue until the site has reached a stabilization level of 70% of pre-disturbance conditions. Once the site reached final stabilization, a post construction storm water management program will be implemented per COGCC Final Amended Rules (December 17, 2008), Rule 1002 (f)(3).

Redistribution of Topsoil - Topsoil would be uniformly re-distributed over all disturbed areas prior to seeding. All compacted portions of the pad, road, and pipeline route will be ripped to a depth of 18 inches unless in solid rock. Prior to seeding, stockpiled topsoil (stripped surface material) will be spread to a uniform depth that will allow the establishment of desirable vegetation. Topsoil would be uniformly re-distributed over all disturbed areas prior to seeding.

Segregation of spoil materials (stockpiles) - Different soil horizons will be segregated. The topsoil horizon or the top six (6) inches, whichever is deeper, will be separated and stored in locations noted on construction drawings. Other soil horizons will be segregated based upon noted changes in physical characteristics such as organic content, color, texture, density or consistency.

Soil Treatment - Soil samples will be collected and analyzed to determine the need to add amendments. Amendments will be utilized, as applicable, upon receiving prior approval from the BLM.

Seeding/Re-vegetation - The long term objective is to establish a self-perpetuating plant community that is compatible with and capable of supporting the pre-disturbance land use. The pad will be re-seeded upon completed grading activities with a BLM-approved seed mix and rate of application. The seed will be certified and there will be no primary or secondary noxious weeds in the seed mixture.

Weed Control - Areas being reclaimed will be fenced to exclude livestock for the first two growing season or until the seeded species have established. The type of fencing will be approved by the Authorized Officer. Noxious weeds which may be introduced due to soil disturbance and reclamation will be treated by methods to be approved by the Authorized Officer. The Pesticide Use Permit shall be on record with the BLM for treatment of noxious weeds.

Practices necessary to reclaim all disturbed surfaces, including access roads & pipelines - All areas of surface disturbance would be reclaimed after the permitted wells are drills. The time period between commencement of drilling activities and well abandonment is anticipated to be ~35 years. If it is determined by the Authorized Officer that the above reclamation standards are not being met, the operator will be required to submit a plan to correct the problem. Approval of the plan may require special reclamation practices such as mulching, the method and time of planting, the use of different plant species, soil analysis to determine the need for fertilizer, fertilizing, seed-bed preparation, contour furrowing, watering, terracing, water barring, and the replacement of topsoil.

11. Surface Ownership:

Bureau of Land Management. White River Field Office. 220 E. Market St. Meeker, Colorado 81641 (970) 878-3800.

Any lands crossed by access roads will be public lands.

Landowner agreement form (if applicable) – NA

12. Other Information

The *designated Natural Resource Specialist* will be notified via email or phone 24 hours prior to beginning all construction-related activities associated with these projects that result in disturbance of surface soils. Construction-related activities may include, but are not limited to, pad and road construction, clearing pipeline corridors, trenching, etc. Notification of all construction-related activities, regardless of size, that result in disturbance of surface soils as a result of these projects are required.

Paint and maintain all above ground facilities Shadow Gray, consistent with the BLM Standard Environmental Color Chart. Initial painting will occur within six months of installation.

Environmental Considerations
AIR QUALITY- All equipment and infrastructure will comply with COGCC and CDPHE air quality regulations for an APEN or permitting. WPX Energy takes air emissions, including VOC emissions, very seriously and especially when WPX Energy' operations are within ¼ mile (1320 feet) of a residence or any public structure or dwelling.

Starting in 2009 WPX Energy makes an extra effort not to locate open pits of any kind within ¼ mile of a resident's home and/or public dwellings unless the pit is benign in nature and will not cause any nuisance or health impacts. Furthermore, it is WPX Energy practice and policy to control VOC emissions at a minimum of

95% control efficiency once production on a pad commences and has the potential to cause health impacts at any distance, or odor nuisance at a distance of up to ¼ mile as suggested by the COGCC Odor & nuisance Rules.

WPX Energy adheres to complete compliance with federal and state air quality regulations as prescribed by the Clean Air Act and CDPHE Regulations Nos. 1, 2, 3 & 7. WPX Energy is proactive in its permitting and compliance demonstrations by employing Emission Control Devices (ECD) where it is warranted and closely monitors the operation of these devices. WPX Energy works closely with the CDPHE Air Pollution Control Division to obtain permits and make any air emission controls installed enforceable through compliance demonstrations and ensure that they meet the highest achievable efficiency and standards. WPX will limit unnecessary emissions from point or nonpoint pollution sources and prevent air quality deterioration from necessary pollutions sources in accordance with all applicable state, federal and local air quality law and regulations.

WPX will treat all access roads with water and/or a chemical dust suppressant during construction and drilling activities so that there is not a visible dust trail behind vehicles. Any technique other than the use of freshwater as a dust suppressant on BLM lands will require prior written approval from BLM.
CHEMICAL MANAGEMENT- All chemical management will comply with COGCC, CDPHE and SARA Title III reporting requirements, including MSDS sheets for all chemicals used in WPX Energy' operation.
CULTURAL- Cultural survey were completed and sent to BLM on 10/22/13. WPX will inform all persons who are associated with the project that they will be subject to prosecution for knowingly disturbing archaeological sites or for collecting artifacts.

If any archaeological materials are discovered as a result of operations under this authorization, activity in the vicinity of the discovery will cease, and the BLM WRFO authorization, activity in the vicinity of the discovery will cease, and the BLM WRFO Archaeologist will be notified immediately. Work may not resume at that location until approved by the AO. WPX will make every effort to protect the site from further impacts including looting, erosion, or other human or natural damage until BLM determines a treatment approach, and the treatment is completed. Unless previously determined in treatment plans or agreements, BLM will evaluate the cultural resources and, in consultation with the State Historic Preservation Office (SHPO), select the appropriate mitigation options within 48 hours of the discovery. WPX, under guidance of the BLM, will implement the mitigation in a timely manner. The process will be fully documented in reports, site forms, maps, drawings, and photographs. The BLM will forward documentation to the SHPO for review and concurrence.

Pursuant to 43 CFR 10.4(g), WPX will notify the AO, by telephone an written confirmation, immediately upon the discovery of human remains, funerary items, sacred objects, or objects of cultural patrimony. Further, pursuant to CFR 10.4(c) and (d), WPX will stop activities in the vicinity of the discovery and protect it for 30 days or until notified to proceed by the AO.
FIRE MANAGEMENT- WPX will notify Craig Interagency Dispatch (970-826-5037) in the event of any fire. The reporting party will inform the dispatch center of fire location, size, status, smoke color, aspect, fuel type, and provide their contact information. The reporting party, or a representative of, should remain nearby, in a safe location, in order to make contact with incoming fire resources to expedite actions taken towards an appropriate management response.

All parities will not engage in any fire suppression activities outside the approved project area. Accidental ignitions caused by welding, cuttings, grinding, etc. will be suppressed by the applicant only if employee safety is not endangered and it the fire can be safely contained using hand tools and portable hand pumps. If chemical fire extinguishers are used WPX must notify incoming fire resources on extinguisher type and the location of use.

WPX will chip and mix with topsoil for future redistribution all vegetation not being used for storm water management or erosion controls.
GROUNDWATER- Drilling plans will comply with COGCC, CDPHE, and local government agency ground water protection regulations.
MINERALS- STATE AND COUNTY- APDs will be submitted to the COGCC for State Approval in accordance with COGCC Title 34 regulations. Any SUP or other county requirements will be complied with.
NOISE- Noise thresholds as established by the COGCC will be complied with in accordance with State Title 34 regulations.

PALEONTOLOGICAL RESOURCES- WPX will inform all persons who are associated with the project that they will be subject to prosecution for knowingly disturbing or collecting vertebrate fossils, collecting large amounts of petrified wood (over 25lbs/day, up to 250lbs/year) or collecting fossils for commercial purposes on public lands.

If any paleontological resources are discovered as a result of operations under this authorization, WPX and any of its agents will stop work immediately at that site, and the BLM Paleontology Coordinator will be notified immediately. WPX will make every effort to protect the site from further impacts, including looting, erosion, or other human or natural damage. Work may not resume at that location until approved by the AO. The BLM or designated paleontologist will evaluate the discovery and take action to protect or remove the resource within 10 working days. Within 10 days, WPX will be allowed to continue construction through the site, or will be given the choice of either (a) following the Paleontology Coordinator's instructions for stabilizing the fossil resource in place and avoiding further disturbance to the fossil resource, or (b) following the Paleontology Coordinator's instructions for mitigating impacts to the fossil resource prior to continuing construction through the project area.

PLANTS/RAPTORS – Surveys were completed and sent to BLM on 10/22/13.

RANGE MANAGEMENT- Fences, water developments, cattleguards, gates or other livestock handling/distribution facilities that are damaged or destroyed either directly or indirectly as a result of implementation of this proposed action shall be promptly repaired or replace dby WPX to restore pre-disturbance functionality.

WPX will notify the permittee authorized to graze livestock within the project area or the WRFO Range Management staff of planning construction activities 72 hour prior to beginning construction.
SOILS- Erosion features such as rilling, gullying, piping and mass wasting on the surface disturbance or adjacent to the surface disturbance as a result of these actions will be addressed immediately after observation by contacting the Authorized Officer (AO) and by submitting a plan to assure successful soil stabilization with BMP's to address erosion problems.
SPILLS- All spills will be managed in accordance with Federal, State and local requirements, including notification, reporting, response and remediation actions.
VRM- WPX will paint and maintain all above ground facilities Shadow Gray, consistent with the BLM standard Environmental Color Chart. Initial paingint will occur within six months of installation.
WATER – GENERAL / NPDES / WATER RIGHTS-Any NPDES discharge permits (if needed) and water rights obligations will be complied with under state COGCC, CDPHE and SEO regulations. Per baseline water sampling no water supplies were detected.
WATER – 404 LOCATIONS - If locations appear to fall under COE jurisdiction and qualify for Nationwide Permits they will be tracked and comply with NWP terms and conditions. Preconstruction notification to the COE in accordance with 33 CFR 330 will be meet when required
WATER – SPCC- All SPCC locations with comply with EPA, COGCC and CDPHE requirements for plans and reporting in accordance with 40 CFR 112.

13. Representative (Lessee's or Operator's) & Certification

The operator has certified that the statements made in the APD packages are true and correct, the work associated the proposed operations will be performed in conformity with the APD packages, and that they possess full knowledge of state and Federal laws applicable to this operation. The operator certifies that they are responsible for operations conducted under this application.

BCU 31-25-199 Lease COC-60842

	Disturbance in acres during Construction Phase	Disturbance in acres during Production Phase	Disturbance in acres following Abandonment	COMMENTS
1000ft access road	0.69	0.57	0	This will be a new road from pad to CR 88.
5600ft pipeline corridor	7.71	0	0	This will be a new PL ROW. The PL ROW will be completely reclaimed after construction. (Does not include road footage)
well pad	±6.58	±1.55	0	Only represents well pad
Total	±14.98	±2.12	0	

Disturbance Categories	Acres
Total Existing/MDP Disturbed Acres	10.29
Total Lease Acres	1,2860
Total Disturbed Acres on Lease as % of Total Lease Acreage	0.80%

U.S. Department of the Interior
Bureau of Land Management
White River Field Office
220 E Market St
Meeker, CO 81641

Finding of No Significant Impact (FONSI)

DOI-BLM-CO-N05-2014-0047-EA

BACKGROUND:

WPX Energy has requested authorization to construct the BCU 31-25-199 well pad and drill two natural gas wells (BCU 31-25-199 and BCU 432-25-199) (Figure 1). The applicant also requests authorization to install approximately 5,600 feet of gathering lines (both gas and water) and 1,000 feet of access road to the location. The tentative construction date for the well pad is upon approval. If approved and implemented, this action would result in approximately 15 acres of surface disturbance (Table 1).

FINDING OF NO SIGNFICANT IMPACT

Based upon a review of the EA and the supporting documents, I have determined that the Proposed Action will not have a significant effect on the quality of the human environment, individually or cumulatively with other actions in the general area. No environmental effects meet the definition of significance in context or intensity, as defined at 40 CFR 1508.27 and do not exceed those effects as described in the White River Resource Area Proposed Resource Management Plan and Final Environmental Impact Statement (1996). Therefore, an environmental impact statement is not required. This finding is based on the context and intensity of the project as described below.

Context

The project is a site-specific action directly involving BLM administered public lands that do not in and of itself have international, national, regional, or state-wide importance. The lease area is relatively undeveloped so impacts to soil and other biological resources would be considered local, low intensity, and of short duration. Road density within 5 miles of the proposed well pad equals approximately 2.3 miles of road corridor per square mile. Producing well density within 5 miles of the proposed well pad location equals approximately 0.8 producing wells per square mile.

Intensity

The following discussion is organized around the 10 Significance Criteria described at 40 CFR 1508.27. The following have been considered in evaluating intensity for this Proposed Action:

1. Impacts that may be both beneficial and adverse.

The site location for the proposed well has been described as having a component of invasive, annual cheatgrass. Proper and effective implementation of the proposed reclamation techniques could provide beneficial diversity to the currently existing plant community. While potentially

harmful chemicals and additives may be used during drilling and completions operations, there is a possibility they could be released in volumes that could adversely affect human health or the environment; however, the proponent provides for safe containment and disposal of each type of potential waste, and the use of these materials are expected to enhance the beneficial recovery of the natural gas resource.

2. The degree to which the Proposed Action affects public health or safety.
There would be no impact to public health and safety if the safety measures described in the operator's drilling plan and SUP are properly implemented, and the developed mitigation is adhered to.

3. Unique characteristics of the geographic area such as proximity to historic or cultural resources, park lands, prime farmlands, wetlands, wild and scenic rivers, or ecologically critical areas. No wetlands, prime farmlands, parklands, or scenic rivers occur in the project area. A Class III Cultural Resource inventory identified no eligible cultural resources in the proposed areas of disturbance.

4. Degree to which the possible effects on the quality of the human environment are likely to be highly controversial. No comments or concerns have been received regarding possible effects on the quality of the human environment during the public comment period.

5. Degree to which the possible effects on the quality of the human environment are highly uncertain or involve unique or unknown risk.
No highly uncertain or unknown risks to the human environment were identified during analysis of the Proposed Action.

6. Degree to which the action may establish a precedent for future actions with significant effects or represents a decision in principle about a future consideration.
The Proposed Action neither establishes a precedent for future BLM actions with significant effects nor represents a decision in principle about a future consideration. Similar proposals to drill have been evaluated and approved, so authorization to drill the proposed wells would not set a precedent for future actions.

7. Whether the action is related to other actions with individually insignificant but cumulatively significant impacts. Rangeland used for livestock grazing has been described as populated with cheatgrass; implementation of the Proposed Action alone would not substantially contribute to the quality of the rangeland resources but an increase in construction-related oil and gas activities (reasonable but not yet proposed or speculated for the project area) could cumulatively result in irreversible changes to plant species composition.

8. The degree to which the action may adversely affect districts, sites, highways, structures, or objects listed on the National Register of Historic Places or may cause loss or destruction of significant scientific, cultural, or historical resources. A Class III inventory identified no new cultural resources in the proposed project area. Mitigation for cultural resources that may be exposed due to natural weathering and constructing activity has been provided in the Decision Record.

9. The degree to which the action may adversely affect an endangered or threatened species or its habitat that has been determined to be critical under the Endangered Species Act (ESA) of 1973. No special status plant species concerns have been identified. Cumulative water depletions from the Colorado River Basin are considered likely to jeopardize the continued existence of the Colorado pikeminnow, humpback chub, bonytail, and razorback sucker and result in the destruction or adverse modification of their critical habitat. In 2008, BLM prepared a Programmatic Biological Assessment (PBA) that addressed water depleting activities associated with BLM's fluid minerals program in the Colorado River Basin in Colorado, including water used for well drilling, hydrostatic testing of pipelines, and dust abatement on roads. In response, the U.S. Fish and Wildlife Service (FWS) prepared a Programmatic Biological Opinion (PBO) that addressed water depletions associated with fluid minerals development on BLM lands. The PBO included reasonable and prudent alternatives which allowed BLM to authorize oil and gas wells that result in water depletion while avoiding the likelihood of jeopardy to the endangered fishes and avoiding destruction or adverse modification of their critical habitat. The reasonable and prudent alternative authorized BLM to solicit a one-time contribution to the Recovery Implementation Program for Endangered Fish Species in the Upper Colorado River Basin (Recovery Program) in an amount based on the average annual acre-ft depleted by fluid minerals activities on BLM lands. This contribution was ultimately provided to the Recovery Program through an oil and natural gas development trade association. Development associated with this project would be entered into the WRFO fluid minerals water depletion log that is submitted to the Colorado State Office at the end of each Fiscal Year.

10. Whether the action threatens a violation of Federal, State, or local law or requirements imposed for the protection of the environment.
Neither the Proposed Action nor perceived impacts associated with it violate any laws or requirements imposed for the protection of the environment.

SIGNATURE OF AUTHORIZED OFFICIAL: _____
Field Manager

DATE SIGNED:

U.S. Department of the Interior
Bureau of Land Management
White River Field Office
220 E Market St
Meeker, CO 81641

DECISION RECORD

PROJECT NAME: WPX's proposed BCU 31-25-199 well pad and associated wells (2) in the Barcus Creek watershed

ENVIRONMENTAL ASSESSMENT NUMBER: DOI-BLM-CO-N05-2014-0075-EA

DECISION: It is my decision to implement the Proposed Action, as mitigated in DOI-BLM-CO-N05-2014-0075-EA authorizing the construction, operation, and maintenance of BCU 31-25-199 well pad and associated wells, and pipeline and road infrastructure.

MITIGATION:

Surface and Ground Water Quality

1. To protect surface waters below the project area, the operator will keep road inlet and outlet ditches, sediment retention basins, and culverts free of obstructions, particularly before and during spring run-off and summer convective storms. Provide adequate drainage spacing to avoid accumulation of water in ditches or on road surfaces.

2. When drilling to set the conductor and surface casing, drilling fluid will be composed only of fresh water, bentonite, and/or a benign lost circulation material that does not pose a risk of harm to human health or the environment.

Vegetation

3. Seed Mix #2 with a couple of modifications is recommended for the well pad, road, and pipeline. Application rates are shown in pounds of pure live seed per acre.

Table 7: Recommended Seeding Species and Application Rates

Variety	Common Name	Scientific Name	Application Rate
Rosana	Western Wheatgrass	*Pascopyrum smithii*	4
Rimrock	Indian Ricegrass	*Achnatherum hymenoides*	3.5
Whitmar	Bluebunch Wheatgrass	*Pseuforoegneria spicata*	4
	Needle and Thread	*Heperostipa comata*	2
Timp	Northern Sweetvetch	*Heysarum boreale*	2
	Scarlet Globemallow	*Sphaeralcea coccinea*	0.5

Invasive, Non-native species

4. The operator should eliminate any noxious plants before seed production occurs. The operator should clean all off-road equipment to remove seed and soil prior to commencing operations within the project area.

Special Status Animal Species

5. WRFO requests WPX's voluntary commitment in refraining from non-emergency use of RBC 88 northeast of the project site toward Yellow Creek as much as practical while midget faded rattlesnakes are active from late April through mid-October and confining necessary use to the hours between 11 AM to 6 PM when the snakes are most apt to be stationary and least susceptible to vehicle-related mortality.

6. In the event project scheduling is altered and project work (e.g., vegetation clearing, earthwork, well development activity, pipeline trenching, reclamation) would be conducted while the snakes are active (i.e., late April through mid-October), surveys for den sites must be performed by qualified biologists in suitable habitat within 200 meters of any project feature, including access. Within 200 meters of a den site, any area slated for vegetation clearing must be cleared for the presence of snakes immediately prior to each day's work. Pipeline trenching, pipeline installation, and trench backfilling should be conducted in a manner that minimizes the length of open trench remaining through the evening and nighttime hours that may entrap snakes dispersing from or returning to den sites.

Wild Horses

7. Prior to surface-disturbing activities, WPX and/or their contractors should determine if wild horses are present in the vicinity of proposed project area. During the spring foaling period, between March 1 and June 15, if BLM determines wild horses are in the vicinity of proposed development, development activities may be delayed for a specified 60-day period from within the window of March 1 through June 15, as outlined by the White River ROD/RMP, to reduce impacts during this sensitive time period. Further, project activities may need to be adjusted around a wild horse gather if construction is scheduled during the same time as a gather operation. The lessee may also be required to perform special conservation measures within this area including: a) habitat improvement projects in adjacent areas, if development displaces wild horses from critical habitat; b) replacement of disturbed watering sites with an equal source of water having equal utility; and c) activity/improvements providing for unrestricted movement of wild horses between summer and winter ranges.

8. In the wild horse use area while the trenches are open, prior to the burial of the pipeline, the trench should be inspected daily for wild horses they may have become trapped should they have fallen into the trench. Ramps will be constructed along the trench which will allow wild horses the ability to exit the trench if they have fallen into the trench. If deceased wild horses are found in the trench the WRFO will be notified.

9. Should the Proposed Action occur simultaneous with a wild horse gather, all project-related traffic would need to be coordinated with the BLM and the contractor for the gather.

10. To minimize the incidents of young foals becoming dislocated from their mares, construction, drilling and receiving crews would be required to slow or stop when wild horses are encountered, allowing bands to move away at a pace slow enough so that the foals can keep pace and are not separated.

Cultural Resources

11. If any archaeological materials are discovered as a result of operations under this authorization, activity in the vicinity of the discovery will cease, and the BLM WRFO Archaeologist will be notified immediately. Work may not resume at that location until approved by the AO. The operator will make every effort to protect the site from further impacts including looting, erosion, or other human or natural damage until BLM determines a treatment approach, and the treatment is completed. Unless previously determined in treatment plans or agreements, BLM will evaluate the cultural resources and, in consultation with the State Historic Preservation Office (SHPO), select the appropriate mitigation option within 48 hours of the discovery. The operator, under guidance of the BLM, will implement the mitigation in a timely manner. The process will be fully documented in reports, site forms, maps, drawings, and photographs. The BLM will forward documentation to the SHPO for review and concurrence.

12. An archeological monitor will be required during all trenching in the alluvium of Barcus Creek.

Paleontological Resources

13. The operator is responsible for informing all persons who are associated with the project operations that they will be subject to prosecution for disturbing or collecting vertebrate or other scientifically important fossils, collecting large amounts of petrified wood (over 25lbs./day, up to 250lbs./year), or collecting fossils for commercial purposes on public lands.

14. Any excavations into the underlying native sedimentary stone must be monitored by a permitted paleontologist. The monitoring paleontologist must be present before the start of excavations that may impact bedrock.

Visual Resources

15. Paint and maintain the paint on all permanent above ground structures (on-site for six months or longer) including tanks, associated production equipment, and any piping and valves. Paint color is to be Juniper Green according to the BLM Standard Environmental Chart CC-001: June 2008.

Hazardous Materials

16. Comply with all Federal, State and/or local laws, rules and regulations, including but not limited to onshore orders and notices to lessees, addressing the emission of and/or the

handling, use, and release of any substance that poses a risk of harm to human health or the environment. All spills or leakages of oil, gas, produced water, toxic liquids or waste materials, blowouts, fires, shall be reported by the operator in accordance with the regulations and as prescribed in applicable orders or notices .

17. Where required by law or regulation to develop a plan for the prevention of releases or the recovery of a release of any substance that poses a risk of harm to human health or the environment, provide a current copy of said plan to the BLM WRFO.
18. When drilling to set the surface casing, drilling fluid will be composed only of fresh water, bentonite, and/or a benign lost circulation material that does not pose a risk of harm to human health or the environment (e.g., cedar bark, shredded cane stalks, mineral fiber and hair, mica flakes, ground and sized limestone or marble, wood, nut hulls, corncobs, or cotton hulls).
19. All substances that pose a risk of harm to human health or the environment shall be stored in appropriate containers. Fluids that pose a risk of harm to human health or the environment, including but not limited to produced water, shall be stored in appropriate containers and in secondary containment systems at 110% of the largest vessel's capacity. Secondary fluid containment systems, including but not limited to tank batteries shall be lined with a minimum 24 mil impermeable liner.
20. Construction sites and all facilities shall be maintained in a sanitary condition at all times; waste materials shall be disposed of promptly at an appropriate waste disposal site. "Waste" means all discarded matter including, but not limited to, human waste, trash, garbage, refuse, oil drums, petroleum products, ashes, and equipment.
21. As a reasonable and prudent lessee/operator in the oil and gas industry, acting in good faith, all lessees/operators and right-of-way holders will report all emissions or releases that may pose a risk of harm to human health or the environment, regardless of a substance's status as exempt or nonexempt and regardless of fault, to the BLM WRFO (970) 878-3800.
22. As a reasonable and prudent lessees/operator and/or right-of-way holder in the oil and gas industry, acting in good faith, all lessees/operators and right-of-way holders will provide for the immediate clean-up and testing of air, water (surface and/or ground) and soils contaminated by the emission or release of any substance that may pose a risk of harm to human health or the environment, regardless of that substance's status as exempt or non-exempt. Where the lessee/operator or right-of-way holder fails, refuses or neglects to provide for the immediate clean-up and testing of air, water (surface and/or ground) and soils contaminated by the emission or release of any quantity of a substance that poses a risk of harm to human health or the environment, the BLM WRFO may take measures to clean-up and test air, water (surface and/or ground) and soils at the lessee/operator's expense. Such action will not relieve the lessee/operator of any liability or responsibility.

Fire Management

23. When working on lands administered by the BLM WRFO, notify Craig Interagency Dispatch (970-826-5037) in the event of any fire.

a) The reporting party will inform the dispatch center of fire location, size, status, smoke color, aspect, fuel type, and provide their contact information.

b) The reporting party, or a representative of, should remain nearby, in a safe location, in order to make contact with incoming fire resources to expedite actions taken towards an appropriate management response.

c) The applicant and contractors will not engage in any fire suppression activities outside the approved project area. Accidental ignitions caused by welding, cutting, grinding, etc. will be suppressed by the applicant only if employee safety is not endangered and if the fire can be safely contained using hand tools and portable hand pumps. If chemical fire extinguishers are used the applicant must notify incoming fire resources on extinguisher type and the location of use.

d) Natural ignitions caused by lightning will be managed by Federal fire personnel. The use of heavy equipment for fire suppression is prohibited, unless authorized by the Field Office Manager.

Floodplains, Hydrology, and Water Rights

24. The operator will submit a crossing design that adequately addresses potential peak flow events on East Barcus Creek for the new road segment. The operator must submit via sundry a crossing design that allows for the passage of the 10 year storm without erosion and the 25 year event without failure. If a culvert is proposed, the operator should estimate these peak methods using a suitable hydrologic method such as TR-55 and size the culverts accordingly. The proposed design should provide details about the method for armoring the crossing if a low water crossing is used. The crossing design should be approved by BLM and implemented before the drill rig occupies the pad.

Realty Authorizations

25. The holder shall provide the BLM AO with data in a format compatible with the WRFO's ESRI ArcGIS Geographic Information System (GIS) to accurately locate and identify the ROW and all constructed infrastructure, (as-built maps) within 60 days of construction completion. Acceptable data formats are: (1) corrected global positioning system (GPS) files with sub-meter accuracy or better; (2) ESRI shapefiles or geodatabases; or at last resort, (3) AutoCAD .dwg or .dxf files. Option 2 is highly preferred. In ALL cases the data must be submitted in Universal Transverse Mercator (UTM) Zone 13N, NAD 83, in units of meters. Data may be submitted as: (1) an email attachment; or (2) on a standard compact disk (CD) in compressed (WinZip only) or uncompressed format. All data shall include metadata, for each submitted layer, that conforms to the Content Standards for Digital Geospatial Metadata from the Federal Geographic Data Committee standards. Questions should be directed to WRFO BLM GIS staff at (970) 878-3800.

26. Construction activity should take place entirely within the areas authorized in the ROW grant and temporary use permit.

27. At least 90 days prior to termination of the ROW, the holder shall contact the AO to arrange a joint inspection of the ROW. The inspection will result in the development of an acceptable termination and rehabilitation plan submitted by the holder. This plan shall

include, but is not limited to, removal of facilities, drainage structures, and surface material (e.g., gravel or concrete), as well as final recontouring, spreading of topsoil, and seeding. The Authorized Officer must approve the plan in writing prior to the holder's commencement of any termination activities.

28. No surface disturbing activities shall take place on the subject right-of-way until the associated APD is approved. The holder will adhere to special stipulations in the Surface Use Program of the approved APD, relevant to any right-of-way facilities.

29. Boundary adjustments in Oil and Gas lease/unit COC60842 shall automatically amend this right-of-way to include that portion of the facility no longer contained within the above described lease/unit COC60842. In the event of an automatic amendment to this right-of-way, the prior on-lease/unit conditions of approval of this facility will not be affected even though they would now apply to facilities outside of the lease/unit as a result of a boundary adjustment. Rental fees, if appropriate shall be recalculated based on the conditions of this grant and the regulations in effect at the time of an automatic amendment.

Access and Transportation

30. All construction activity shall cease when soils or roads surfaces become saturated to a depth of three inches unless approved by the Authorized Officer.

31. Place barriers across the pipeline corridor just east of where it leaves RBC Road 88 and where it terminates on the east end in a manner that prevents unauthorized motorized vehicle use along this section of the pipeline corridor.

COMPLIANCE WITH LAWS & CONFORMANCE WITH THE LAND USE PLAN

This decision is in compliance with the Endangered Species Act and the National Historic Preservation Act. It is also in conformance with the 1997 White River Record of Decision/Approved Resource Management Plan.

ENVIRONMENTAL ANALYSIS AND FINDING OF NO SIGNIFICANT IMPACT

The Proposed Action was analyzed in DOI-BLM-CO-N05-2014-0047-EA and it was found to have no significant impacts, thus an EIS is not required.

PUBLIC INVOLVEMENT:

Scoping was the primary mechanism used by the BLM to initially identify issues. Internal scoping was initiated when the project was presented to the White River Field Office (WRFO) interdisciplinary team on May 20, 2014. External scoping was conducted by posting this project on the WRFO's on-line National Environmental Policy Act (NEPA) register on May 20, 2014.

RATIONALE: Analysis of the Proposed Action has concluded that there are no significant negative impacts and that it meets Colorado Standards for Public Land Health. Additionally, authorization to drill the proposed well would allow for the development of an oil and gas lease. The Proposed Action is for two natural gas wells on the BCU 31-25-199 locations. Estimates of

surface disturbance within the lease (COC1491 at the surface location) that are most likely attributed to oil and gas activities equal approximately 23 acres. This area represents 4 percent of the total area of the lease, which is approximately 600 acres in size. Producing well density in the project area equals <1 producing well per square mile, while road density in the project area equals approximately 3 miles of road per square mile.

ADMINISTRATIVE REMEDIES

State Director Review

Under regulations addressed in 43 CFR 3165.3(b), any adversely affected party that contests a decision of the Authorized Officer may request an administrative review, before the State Director, either with or without oral presentation. Such request, including all supporting documentation, shall be filed in writing with the BLM Colorado State Office at 2850 Youngfield Street, Lakewood, Colorado 80215 within 20 business days of the date such decision was received or considered to have been received. Upon request and showing of good cause, an extension may be granted by the State Director. Such review shall include all factors or circumstances relevant to the particular case.

Appeal

Any party who is adversely affected by the decision of the State Director after State Director review, under 43 CFR 3165.3(b), of a decision may appeal that decision to the Interior Board of Land Appeals pursuant to the regulations set out in 43 CRF Part 4.

This decision shall take effect immediately upon the date it is signed by the Authorized Officer and shall remain in effect while any appeal is pending unless the Interior Board of Land Appeals issues a stay (43 CFR 2801.10(b)). Any appeal of this decision must follow the procedures set forth in 43 CFR Part 4. Within 30 days of the decision, a Notice of Appeal must be filed in the office of the Authorized Officer at White River Field Office, 220 East Market St., Meeker, CO 81641 with copies sent to the Regional Solicitor, Rocky Mountain Region, 755 Parfet St., Suite 151, Lakewood, CO 80215, and to the Department of the Interior, Board of Land Appeals, 801 North Quincy St., MS300-QC, Arlington, VA, 22203. If a statement of reasons for the appeal is not included with the notice, it must be filed with the Interior Board of Land Appeals at the above address within 30 days after the Notice of Appeal is filed with the Authorized Officer.

SIGNATURE OF AUTHORIZED OFFICIAL: _____

Field Manager

DATE SIGNED: