

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-110-2012-0140-Environmental Assessment (EA)

CASEFILE/PROJECT NUMBER: COC-62586
COC75934 (Bargath natural gas pipeline ROW)
COC75934-01 (Temporary use permit)

PROJECT NAME: WPX four APDs on new well pad BCU 442-36-199

LEGAL DESCRIPTION: T1N, R99W, Sec.36, SENE

APPLICANT: WPX Energy Rocky Mountain LLC (WPX)

PURPOSE & NEED FOR THE ACTION:

The purpose of the Proposed Action is to manage the exploration and development of mineral resources on Public Lands in a manner that avoids, minimizes, reduces, or mitigates potential impacts to other resource values.

The purpose of the action is to allow the development of Federal Leases on Bureau of Land Management (BLM) surface through the drilling of the proposed well and associated actions. The need for the action is established under the authority of Federal Land Policy and Management Act of 1976 (FLPMA) to respond to the request to develop the federal leases.

Decision to be Made: The BLM will decide whether or not to approve the construction, drilling, operation, and maintenance of the BCU 442-36-199 well pad and four wells, and if so, under what conditions.

DESCRIPTION OF PROPOSED ACTION AND ALTERNATIVES:

Proposed Action:

WPX Energy Rocky Mountain LLC (WPX) proposes to construct, drill, operate and maintain four new wells (Barcus Creek Unit (BCU) 33-36-198, BCU 341-36-199, BCU 532-36-199, and BCU 442-36-199) from the BCU 442-36-199 well pad. The wells would be drilled using a semi-closed loop drilling system; all drill fluids would be contained within a closed loop and recycled,

but cleaned and dried drilled cuttings would be contained and buried in an open cuttings trench located on the well pad surface.

Construction would begin in February 2013. Construction of the well pad (including installation of stormwater features) would require 6.4 acres of initial surface disturbance during construction. The well pad would be reclaimed down to 1.3 acres within six months of well completions. Currently, the wells are scheduled to be spud in April 2013 and to be completed by June 2013.

A new eight inch gas line and a new four inch water line would be buried from the existing infrastructure located on the north side of County Road (CR) 122 (at the intersection of the CR and the access road to the existing BCU 12-31-198 pad) to the pad following the CR and the proposed access road, as shown on the Plan of Development Map ([See Figure 1. Plan of Development Map below](#)). The approximate length of the pipeline route would be 2,330ft. The total Right-of-Way (ROW) width requested is 75ft. WPX proposes to construct 1,220ft of new access road within the 75ft ROW, a total disturbance of 2.1 acres. The road would be reclaimed down to a 20ft visible travel surface during the production phase, or a total of 0.6 acres of visible surface disturbance. The pipeline would continue for additional 1,110ft beyond the access road, resulting in an additional 1.9 acres of surface disturbance.

A total of 10.4 acres of surface disturbance resulting during construction would be reclaimed down to 1.9 acres during production, and all surface disturbance would be completely reclaimed at the time of the well abandonment. A summary of the total surface disturbance that would be required to construct the well pad and associated infrastructure is summarized below in Table 1 below.

Table 1. Anticipated Surface Disturbance at Various Phases of the Proposed Operation to Construct, Drill from, and Reclaim the BCU 442-36-199 Well Pad

	Disturbance in acres during Construction Phase	Disturbance in acres during Production Phase	Disturbance in acres following Abandonment	COMMENTS
1,220 ft access road and pipeline corridor	2.1	0.6	0.0	75ft ROW during construction phase reclaimed down to 20ft travel surface during production phase.
1,110 additional feet of pipeline beyond the access road	1.9	0.0	0.0	75ft construction ROW
well pad	6.4	1.3	0.0	
Total	10.4	1.9	0.0	

Design Features: Specific design features are included in the attached Surface Use Plan (SUP) ([See Attachment 1](#). Surface Use Plan), which can be supplemented by the [Master SUP](#). Deficiencies identified in the original SUP were addressed via Sundry Notice ([See Attachment 2](#). APD Deficiencies Addressed). A revision to the pipeline route was provided to the WRFO via Sundry Notice, and is available for review ([See Attachment 3](#). Revised Pipeline Route).

No Action Alternative: The BCU 442-36-199 well pad and four wells would not be constructed, drilled, or maintained. The associated access road and pipeline corridors would also not be constructed.

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: 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.

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
Recreation	X	X	X
Invasive Weed Inventory and Treatments	X	X	X
Range Improvement Projects : Water Developments Fences & Cattleguards	X	X	X
Wildfire and Emergency Stabilization and Rehabilitation	X	X	X
Wind Energy Met Towers			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.

Determination¹	Resource	Rationale for Determination
PI	Surface and Ground Water Quality*	See discussion below.
Biological Resources		
NP	Wetlands and Riparian Zones*	There are no systems that support riparian vegetation that would have the potential to be influenced by the Proposed Action. Yellow Creek, the nearest aquatic system that supports wetland and riparian vegetation, is separate from the project area by approximately 9.2 miles of ephemeral channel.
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.
NP	Aquatic Wildlife*	There are no systems that support aquatic wildlife or provide habitat for aquatic species that would have the potential to be influenced by the Proposed Action. Yellow Creek, the nearest system which supports higher order aquatic vertebrate species, is separated from the proposed location by approximately 9.2 miles of ephemeral channel.
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.
NI	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.
NP	Environmental Justice	According to the most recent Census Bureau statistics (2000), there are no minority or low income populations within the WRFO.

Determination ¹	Resource	Rationale for Determination
NP	Lands with Wilderness Characteristics	There are no lands with Wilderness characteristics within the project area.
Resource Uses		
PI	Forest Management	See discussion below.
PI	Rangeland Management	See discussion below.
NI	Floodplains, Hydrology, and Water Rights	There are no floodplains that will be impacted by the project. Drainage patterns around the pad site and the improved access roads have been considered in the designs submitted with the SUP. Freshwater will come from approved water rights.
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 (ACEC)	The nearest ACEC is the Duck Creek ACEC which is approximately 1.5 miles south of the Project Area. No negative impacts to this ACEC are expected under the Proposed Action.
NP	Wilderness	There are no Wilderness Areas or Wilderness Study Areas impacted by 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 an attainment area for national and state air quality standards, based on a review of designated non-attainment areas for criteria pollutants published by the Environmental Protection Agency (EPA 2013). The Proposed Action is also located more than 10-miles from any special designation airsheds or non-attainment areas. Non-attainment areas are areas designated by the EPA as having air pollution levels that persistently exceed the national ambient air quality (NAAQ) standards. Projects that could impact special designation areas and/or non-attainment areas may require special consideration from the Colorado Department of Public Health and Environment (CDPHE) and the EPA. The closest special designation areas are Dinosaur National Monument which is 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 Mount Zirkel and Flat Tops Wilderness Areas located north and east of the Proposed Action (designated Class I areas). The closest non-

attainment area in Colorado is along the Front Range corridor. General conformity regulations require that federal activities do not cause or contribute to a new violation of NAAQ standards; that actions do not cause additional or worsen existing violations of the NAAQ standards; and that attainment of these standards is not delayed by federal actions in non-attainment areas.

The Proposed Action is in Rio Blanco County within the Western Counties Monitoring Region of Colorado (APCD 2010). Local air quality parameters including particulates are measured at monitoring sites located at Meeker, Rangely, Dinosaur and Ripple Creek Pass near the Flat Tops Wilderness Area. Ozone data have been collected in Meeker and Rangely since 2010 and at Colorado National Monument in Mesa County since 2007. To a limited extent ozone is also measured at Dinosaur National Monument. 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 air borne particles.

Environmental Consequences of the Proposed Action:

Direct and Indirect Effects: The Proposed Action would result in low and short-term impacts on air quality during construction, drilling, completion and, to a lesser extent, from vehicles and gas processing and compression facilities during the production phase. Increases in the following criteria pollutants would occur due to combustion of fossil fuels during construction activities: carbon monoxide, ozone (secondary pollutant formed photochemically from volatile organic compounds (VOCs) and nitrogen oxides (NOx)), nitrogen dioxide, and sulfur dioxide. Three ozone advisories were issued in February and March of 2011 for Rio Blanco County (CAQCC 2011) based on data collected from the Rangely monitoring site showing 1 hour and 8 hour exceedance of NAAQ criteria, but did not lead to a violation of NAAQ standards. Ozone above the 1 hour and 8 hour criteria can cause breathing difficulties and respiratory infections especially in the elderly, the young and those with pre-existing ailments such as asthma.

Additional low, short-term impacts to air quality may occur due to venting or flaring of gas from the wells and VOCs from pits, storage and treatment of cuttings and tanks during drilling and completion activities. Venting and/or flaring of natural gas is typically done for short periods of time in order to determine potential production amounts and characterize the quality of the gas. If the exploratory wells are successful, VOCs including hazardous air pollutants (HAPs) commonly associated with oil and gas production (benzene, toluene, ethylbenzene, xylene, and n-hexane) will be released from tanks, separation equipment and due to transportation of natural gas, produced water and condensate by pipeline or trucks. The amount of these releases are difficult to estimate, but would be within CDPHE air permit limits estimated in tons per year. Non-criteria pollutants (NAAQ standards 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.

Soil disturbance resulting from construction, heavy equipment, and drill rigs is expected to cause increases in fugitive dust and inhalable particulate matter, specifically particulate matter (PM) 10 microns (μm) or less in diameter (PM_{10}) and particles 2.5 μm or less in diameter ($\text{PM}_{2.5}$). Particulate matter is made up of a number of components, including acids (such as nitrates and sulfates), organic chemicals, metals, and soil or dust particles. More than 70 percent of PM_{10}

(coarse particles) is created from windblown dust and soil from roads, fields and construction sites. A smaller percentage of coarse particles comes from automobile and diesel engine exhaust, soot from wood fires, and sulfates and nitrates from combustion sources such as industrial boilers (CAQCC 2011). Dust production is the most likely during the construction and drilling phases, especially when conditions are dry and/or windy. Particulate matter is the major contributor to reductions in visibility, due to their ability to scatter or absorb light. Particulate matter can also have human health impacts.

Fugitive dust emissions would likely cause low, short-term impacts to local air quality, specifically visibility. Once the wells go into interim reclamation, topsoil removed during road construction would be redistributed and stabilized alongside the road and the pads would also be recontoured and stabilized. As vegetation establishes in the reclaimed areas, dust production will occur only when vehicles travel on the access roads to service the wells. The increase in airborne particulate matter from this project is not expected to exceed CAAQ or NAAQ standards on an hourly, 8-hour average or daily basis.

In summary, soil disturbance resulting from construction of pads and roads and drilling is expected to cause increases in fugitive dust and inhalable particulate matter in the project area and immediate vicinity may contribute to reductions in regional visibility. In addition, increases in the following criteria pollutants: carbon monoxide, VOCs, ozone, nitrogen dioxide, and sulfur dioxide would also occur due to combustion of fossil fuels during exploration and production activities. Non-criteria pollutants such as carbon dioxide, methane and nitrous oxides, air toxics (e.g. benzene), total suspended particulates (TSP), and increased impacts to visibility and atmospheric deposition may also increase as a result of the Proposed Action. Even with these increased pollutants the Proposed Action is unlikely to result in an exceedance of NAAQ and CAAQ standards, and is likely to comply with applicable PSD increments and other significant impact thresholds.

Cumulative Effects: The Proposed Action is in the two-county area (Rio Blanco and Garfield Counties); principal air pollution sources include emissions from motor vehicles, oil and gas development, coal-fired power plants, coal mines, sand and gravel operations, windblown dust, and wildfires and prescribed burns (CAQCC 2011). Facility emissions in the two-county area are dominated by emissions related to oil and gas exploration, processing, or transportation. Due to these emission sources in the Piceance, White River and in the nearby Uinta and Yampa River Basins, VOCs, nitrogen oxides, and dust (particulate matter) are likely to increase into the future. However, with the exception of ozone, overall air quality conditions in the White River Basin are likely to continue to be in attainment of NAAQ standards due to effective atmospheric dispersion. Ozone levels may increase in localized area and are influenced by emissions in the White River Basin as well as from the nearby Uinta and Yampa River basins. Data collected in Dinosaur, Meeker and Rangely have measured exceedance in standards for 1-hour and 8-hour values for ozone (120 ppb and 75 ppb, respectively). To date, these exceedances have not been persistent enough to result in a violation of NAAQ standards.

Environmental Consequences of the No Action Alternative:

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

Cumulative Effects: Impacts would be similar to those described for the action alternative.

Mitigation:

1. WPX will 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.
2. 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.

GEOLOGY AND MINERALS

Affected Environment: Surficial geology of the well pad location is the Uinta of the Green River 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, 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 Record of Decision (ROD)/Resource Management Plan (RMP) as available for multi-mineral leasing. This well pad is located in WPX's Barcus Creek Federal Oil and Gas Exploratory Unit COC-70700X on Federal Oil and Gas Lease COC-60846. The Barcus Creek Unit is adjacent to the Blair Mountain, Buckhorn Draw, North Piceance, and Yellow Creek Federal Oil and Gas Exploratory Units. The proposed wells would recover oil and gas resources from Federal Oil and Gas Leases COC-60846 and COC-62856 of the Barcus Creek Unit. 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, nine producing wells on four well pads, and three proposed wells on two pads (COGCC 2012).

Environmental Consequences of the Proposed Action:

Direct and Indirect Effects: There is potential for commingling of the 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 will deplete the hydrocarbon resources in the targeted formation. Future development potential of the oil shale resources near the existing wells may be limited; however, due to the distance to the nearest oil shale research development and demonstration leases (greater than four miles) it unlikely oil shale development would occur near the proposed wells in the foreseeable future.

Cumulative Effects: As mentioned above, the COGCC database (COGCC 2012) identifies nine producing and three proposed oil and gas wells within a one mile radius of well pad BCU 36-1-199. An additional 84 wells for full development of the natural gas resource within this one mile radius would be required if bottom hole spacing of 20 acres is necessary for the recovery of the natural gas resources. Full development of the natural gas resource could

preclude the future recovery of oil shale and sodium resources until the existing natural gas resources are exhausted.

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 to conflicts between recovery of oil shale, sodium, and natural gas resources.

Mitigation: None.

SOIL RESOURCES

Affected Environment: The classifications of soils within 30 meters of the proposed surface disturbance that could be impacted by the Proposed Action are shown in Table 4. There are no fragile soils or soils prone to landslides on Federal lands that will be impacted by this project.

Table 4. Soil Classifications within 30 Meters of the Surface Disturbance Proposed and/or the Centerline of Roads (NRCS, 2008).

Soil Classification	Range Site Description	Potentially Impacted Acres
Rentsac channery loam, 5-50% slopes	Pinyon-Juniper woodlands	23

Rentsac complex soils are shallow and well drained and formed on ridges from calcareous sandstones with channery rock fragments. These channery loam soils have rapid runoff and the hazard of water erosion is moderate to very high.

Environmental Consequences of the Proposed Action:

Direct and Indirect Effects: The Proposed Action would directly disturb an estimated 10.4 acres for the well pad construction, pipelines and the access road. With implementation of proper best management practices (BMPs) for stormwater, construction practices, reclamation practices, and the mitigation described below, impacts to soils outside the 30 meter buffer around the surface disturbance is not expected.

Direct impacts from the construction of the well pad, pipelines and the access road 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 would reduce aeration, permeability and water-holding capacities of soils in some locations. 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 into the future. Loss of topsoil productivity can occur during 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.

These direct impacts could result in increased indirect impacts to soils off the construction site such as increased runoff and erosion. Implementation of BMP's for stormwater, mitigation and reclamation will reduce impacts from this project and should limit impacts to the disturbed areas. However, there is the potential for intense storm events and BMP failures resulting in erosion off the site. This is most likely to occur on the steep slopes adjacent to the well pad. Monitoring of areas around the pad as required in the mitigation below should identify any failure of BMP's or unanticipated erosion and allow a plan to be developed for addressing them.

Indirect impacts from this project could result in contamination of surface and subsurface soils due to unintentional leaks or spills from construction equipment, storage tanks, and production equipment, and if these spills occurred they would affect the productivity of soils.

Cumulative Effects: Well pads in the general area (Yellow Creek watershed) have been and are likely to be multi-well pads like this one and would likely occur on average at 2-3 well pads per square mile. Additional production wells would include surface disturbance for well pads, pipelines, roads and support facilities. Extensive development of oil and gas in this area is foreseeable. Livestock and wild horse grazing (the pad is in the Piceance-East Douglas Herd Management Area) and dispersed recreation occurs on public and private lands in the area and may reduce canopy cover and lead to localized erosion in some reclamation areas. No other impacts other than oil and gas development, livestock, wild horse and recreation are expected in the Yellow Creek watershed. In general, soil disturbance in the Proposed Action and other activities are likely to reduce soil productivity and may lead to increased erosion and instability of soils in local areas, but is not likely to be outside the 30 meter buffer around the disturbance analyzed for impacts to soil resources.

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 action alternative.

Mitigation:

1. In order to protect rangeland health standards for 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 this action 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.
2. All construction activity shall cease when soils or road surfaces become saturated to a depth of three inches unless approved by the AO.

Finding on the Public Land Health Standard #1 for Upland Soils: This action is unlikely to reduce the productivity of soils on public lands.

SURFACE & GROUND WATER QUALITY

Affected Environment: Surface Water: This project is within Duck Creek and Barcus Creek, tributary to Yellow Creek. Table 5 describes water segments that may be impacted by this project.

Table 5. Water Quality Classification Table (WQCC 2012b)

Segment	Segment Name	Use Protected	Protected Beneficial Uses			
			Aquatic Life	Recreation	Agriculture	Water Supply
13b	Mainstem of Yellow Creek including tributaries from their source to Barcus Creek	No	Warm 2	Non-Primary Contact Recreation	Yes	No
13c	Mainstem of Yellow Creek from Barcus Creek to the White River	No	Warm 2	Non-Primary Contact Recreation	Yes	No

Segment 13b describes tributaries to the Yellow Creek that 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 exceeds 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. This segment also has standards that are protective of recreation and agriculture, but not water supply.

Segment 13b is listed on the 303d list of Colorado’s impaired waters for aquatic life for Duck Creek and segment 13c is on the impaired list for total recoverable iron and aquatic life (WQCC 2012a). This aquatic life listing is based on macroinvertebrate sampling done throughout Colorado and indications that the macroinvertebrate communities are different than reference conditions in other streams in Colorado.

Groundwater: Precipitation in this area 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 ground water inputs generally occur in both bedrock and alluvial aquifers along valley bottoms.

Contact springs are common in the area and are often the result of upper bedrock aquifers consisting of fractured sandstones and shales. 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.

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 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 increase surface erosion. Steep-sloped hillsides adjacent and along the access roads are the most likely area for this surface erosion to occur. Stormwater measures and best management practices include periodic monitoring of any erosion problems would be essential to avoid erosion and 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 would be moved into the White River during heavy convective storms. Surface erosion for this project is most likely during the construction and early production phases of the project and would be mitigated using BMP's for stormwater.

The Proposed Action is unlikely to change iron concentrations in Duck Creek or change water quality characteristics in the mainstem of Yellow Creek for aquatic life. BLM has established a streamflow monitoring site on Yellow Creek and both water quality and macroinvertebrates have been sampled at this location and will be monitored into the future as budgets allow.

Groundwaters: Potential freshwater zones that are anticipated in the A and B groove that will be protected by a conductor and surface casing, cementing behind these casing will be carried to the surface. Intermittent casing is planned to protect groundwaters and production zones in the Wasatch. The grade of cement used will vary but will be brought up to previously cementing intervals using standard drilling practices and checked to eliminate gaps between cement. Cement protects the well casings from leaking due to deterioration over the life of the well and allows casings to withstand pressure increases during completion and hydrologic fracturing 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 include freshwater aquifers. If drilling fluids are lost into groundwater aquifers, aquifers may be contaminated by drilling additives. Using bentonite, freshwater and other additives that cannot contaminate groundwater mitigates the loss of drilling fluids that can be common during drilling since the introduction of these substances would not impact the quality of these groundwater features.

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 gas development and even 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 will be disclosed in a chemical disclosure form by well site. Also, chemicals and additives used for hydraulic fracturing will be disclosed on the public web site set up for this purpose.

Hydraulic fracturing is designed to change the producing formations' physical properties by increasing the flow of water and gas around the well bore. Hydraulic fracturing may also introduce chemical additives into the producing formations. Chemical additives used in completion activities will mostly be pumped back to surface tanks before production. Left over fluids will be injected in a Class II injection well nearby.

Known groundwater bearing zones in the project area would be protected by the drilling plan, 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 is unlikely.

Cumulative Effects: Well pads in the general area (Yellow Creek watershed) have been and are likely to be multi-well pads like this one and would likely occur on average at 2-3 well pads per square mile. Additional production wells would include surface disturbance for well pads, pipelines, roads and support facilities. Extensive development of oil and gas in this area is foreseeable. Livestock and wild horse grazing and dispersed recreation occurs on public and private lands in the area and may reduce canopy cover and lead to localized erosion in some reclamation areas. No other impacts other than oil and gas development, livestock, wild horses and recreation are expected 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 action alternative, but would not include the impacts from the Proposed Action.

Mitigation:

1. To protect surface waters below the project area, keep road inlet and outlet ditches, sediment retention basins, and culverts free of obstructions, particularly before and during spring runoff and summer convective storms. Provide adequate drainage spacing to avoid accumulation of water in ditches or on road surfaces.
2. Install culverts and low-water crossings with adequate armoring of inlet and outlet. Patrol areas susceptible to road or watershed damage during periods of high runoff.
3. Locate drainage dips and drainage ditches in such a manner as to avoid discharge onto unstable terrain such as headwalls or slumps. Provide adequate spacing to avoid accumulation of water in ditches or dips.
4. 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 (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).

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

VEGETATION

Affected Environment: The entire project occurs within the Pinyon-Juniper ecological site/range site. This site is primarily made up of Pinyon Pine and Utah Juniper in the over-story and dominated by Indian ricegrass, beardless wheatgrass, prairie junegrass, and mountain mahogany in the understory. Smaller amounts of big sagebrush, antelope bitterbrush, and serviceberry are present within the understory. The project area also has a trace amount of downy brome (cheatgrass) present in the understory. Cheatgrass is an undesirable invasive annual species that can potentially invade disturbed areas forming a monoculture.

Environmental Consequences of the Proposed Action:

Direct and Indirect Effects: The proposed well-pad, road, and pipeline would require the complete removal of vegetation on 10.4 acres. Removal of vegetation has the potential to lead to an increased loss of soils from erosion, and provides a gateway for noxious/invasive weeds to invade the project area. Of the 10.4 acres identified for disturbance, only 1.9 acres is identified as long-term disturbance. The pipeline will be immediately reclaimed following installation, and 1.5 acres along the edges of the road will be reclaimed leaving 0.6 acres of long-term disturbance on the running surface. Approximately 5.1 acres of the well-pad will go into interim reclamation following completion of the wells leaving 1.3 acres of long-term disturbance on the well pad.

Successful reclamation of the project area will mitigate the impacts of soil disturbance and minimize the likelihood of soil loss and weed invasion. The remaining 1.9 acres of long-term disturbance expected to be there for the life of the project will continue to have an increased potential for soil movement and weed invasion.

Cumulative Effects: Within the general area of the project, there had been a high level of oil and gas development in the past. Most oil and gas development requires the complete removal of vegetation during the construction phase of the project. Some of the development is short-term disturbance that is immediately reclaimed upon installation of oil and gas facilities, but there continues to be areas that are disturbed for extended amounts of time (20-30 years). Oil and gas development is expected to continue in the area into the future which could lead to large acres of land devoid of vegetation while oil and gas production is taking place. Cumulative impacts from large acreage being devoid of vegetation could increase erosion and weed invasion in the area until final reclamation is completed.

Environmental Consequences of the No Action Alternative:

Direct and Indirect Effects: The No Action alternative would have no impacts on vegetation in the project area. Under the No Action, the well pad, road, and pipeline would not be constructed, so no disturbance to vegetation would occur.

Cumulative Effects: There would be no contribution to previous or existing disturbances that would potentially impact vegetative communities under the No Action Alternative.

Mitigation:

1. BLM recommends the use of WRFO modified native seed mix #3 for all reclamation in the project area.

Table 6. White River Field Office Modified Native Seed Mix #3

Species	Seeding Rate Pure Live Seed (PLS)*
Western wheatgrass (Rosana)	3 lb/ac. PLS
Indian ricegrass (Rimrock)	3 lb/ac. PLS
Bluebunch wheatgrass (Whitmar)	3.5 lb/ac. PLS
Needle and Thread Grass	2.5 lb/ac. PLS
Scarlet Globemallow	0.5 lb/ac. PLS
Sulphur Flower Buckwheat	1.5 lb/ac. PLS
Lewis Flax (Maple Grove)	1 lb/ac. PLS
Northern Sweetvetch	2 lb/ac. PLS
Sulphur Flower Buckwheat	1 lb/ac. PLS

* Seeding rate is for drilled seeding; for broadcast seeding the rate should be doubled

Finding on the Public Land Health Standard #3 for Plant and Animal Communities: Standard #3 for plant and animal communities in the project area are currently being met. There is a trace amount of the annual invasive species downy brome (cheatgrass) in the project area that could potentially invade the site following disturbance forming a monoculture. This would prevent the area from meeting standards in the future if this happens.

INVASIVE, NON-NATIVE SPECIES

Affected Environment: The proposed well pad, road, and pipeline occur entirely within a pinyon-juniper ecological/range site (See Vegetation Section). No known State of Colorado List A or List B species occur within or immediately adjacent to the project area. Cheatgrass and Halogeton are known to occur in or around the project area, and readily invade disturbed soils.

Environmental Consequences of the Proposed Action:

Direct and Indirect Effects: The project will require the complete removal of vegetation and soil disturbance on 10.4 acres. Removal of vegetation will provide a pathway for noxious/invasive weed establishment within the project area. Equipment used for project construction can act as a vector to transport new weeds on site. Weeds can also establish on site from wildlife or domestic livestock transporting weed seeds or propogules in their fur or in feces. Establishment of weed species on the project area can inhibit the ability of the project to reach successful reclamation upon completion of the project.

Of the 10.4 acres proposed for disturbance, only 1.9 acres has been identified as long-term disturbance. The remaining acres will either go into interim reclamation (well pad) or final

reclamation (edge of road and pipeline). Successful reclamation that is completed as soon as possible following construction of the project would decrease the potential for new weed establishment on the project area. The 1.9 acres of disturbance identified for long-term disturbance will continue to have an increased risk of weed establishment until the end of the project and final reclamation is completed.

Cumulative Effects: Within the general area of the project, there has been a high level of oil and gas development in the past. Most oil and gas development requires the complete removal of vegetation during the construction phase of the project. Some of the development is short-term disturbance that is immediately reclaimed upon installation of oil and gas facilities, but there continues to be areas that are disturbed for extended amounts of time (20-30 years). Oil and gas development is expected to continue in the area into the future which could lead to large acres of land devoid of vegetation while oil and gas production is taking place. Cumulative impacts to soils will continue to provide opportunities for new weed establishment around the project area.

Environmental Consequences of the No Action Alternative:

Direct and Indirect Effects: The No Action alternative would have no impacts on noxious and invasive weeds in the project area. Under the No Action alternative no soil disturbance would take place, so there would be no increased risk for new weed establishment.

Cumulative Effects: There would be no contribution to previous or existing disturbances that would potentially impact noxious/invasive weeds under the No Action Alternative.

Mitigation:

1. The operator will be required to manage weeds that establish on the project area.
2. If herbicides are to be used to manage weeds, an approved pesticide use proposal (PUP) will need to be completed and submitted to the WRFO before any application can take place.
3. Construction equipment will be thoroughly washed prior to being brought on site to minimize the risk of weed seeds and propagules being brought to the project area.

SPECIAL STATUS PLANT SPECIES

Affected Environment: Dudley Bluffs bladderpod (*Physaria congesta*) and Dudley Bluffs twinpod (*Physaria obcordata*) are known to occur in the vicinity of the Proposed Action. The two threatened species are badland or rock outcrop soil associates, and are considered “oil shale endemics” or edaphic (soil-related) endemic species. The bladderpod grows on barren white shale outcrops on tongues of the Green River Formation where it has been exposed along down-cut drainages or windswept ridges. It often grows on level surfaces at the points of ridges or in pinyon-juniper savannah areas where outcrops of the white shale geology has been exposed. The twinpod also grows on barren white shale outcrops on tongues of the Green River Formation where it is exposed along down-cut drainages, sometimes occurring below, or interspersed with the bladderpod habitats. The Yellow Creek of the Green River Formation is present within the project area. The Yellow Creek Tongue is considered suitable habitat for the Dudley Bluffs bladderpod and twinpod. Potential habitat for narrow-stem gilia and debris milkvetch is also

found in the vicinity of the Proposed Action. Both species are considered sensitive and occur in the gravelly/ sandy loams of the Green River Formation.

The project area was surveyed in June of 2012 by WestWater Engineering Inc. and approximately 355.5 acres of suitable habitat for the Dudley Bluffs bladderpod was mapped within 640 meters (1 mile) of the Proposed Action. The closest known occurrence of Dudley Bluffs bladderpod is near Duck Creek, on the 13-mile Creek Tongue, approximately 2.25 miles south of the project area. The area does not appear suitable habitat for the Dudley Bluffs twinpod due to the gentle sloping terrain present throughout the surveyed area. The twinpod typically prefers steep slopes exposed by creek downcutting (Spackman et al. 1997). Table 7 below lists special status plant species that are known or have potential to occur in the project area.

Table 7. Special Status Plant Species Known or with Potential to Occur in the Project Area

Species	Status ¹	Habitat Description	Potential to Occur in the Proposed Project Area
<i>Physaria congesta</i> (Dudley Bluffs bladderpod)	T	Barren, white shale outcrops of the Green River and Uinta Formations (6,000-6,700 ft).	This species is known to occur in the vicinity of proposed project activities. The action is adjacent to but not directly impacting white shale outcrops.
<i>Physaria obcordata</i> (Dudley Bluffs twinpod)	T	Barren white shale outcrops and steep slopes of the Parachute Creek Member of the Green River Formation (5,900-7,500 ft).	This species is known to occur in the vicinity of proposed project activities. The action is adjacent to, but not directly impacting Green River-derived soils.
<i>Aliciella stenothyrsa</i> (<i>Gilia stenothyrsa</i>) (Narrow-stem gilia)	S	Grassland, sagebrush, mountain mahogany or pinyon-juniper; silty to gravelly loam soils of the Green River formation (6,200 -8,600 ft)	This species has the potential to occur in the vicinity of the proposed project activities. The action is adjacent to, but not directly impacting Green River-derived soils.
<i>Astragalus detritalis</i> (Debris milkvetch)	S	Pinyon-juniper and mixed desert shrub, often on rocky soils ranging from sandy clays to sandy loams. Also alluvial terraces with cobbles (5,400-7,200 ft)	This species has the potential to occur in the vicinity of the proposed project activities. The action is adjacent to, but not directly impacting Green River-derived soils.

¹T = Threatened ¹S = Sensitive

Direct and Indirect Effects: There should be no conceivable direct impacts to either of the federally listed *Physaria* species because of the distance of the Proposed Action to the nearest known population. Due to the distance from known populations, it is unlikely there will be any direct impacts to either sensitive species. Construction of the pad and associated access route may potentially remove pollinator habitat and nesting sites causing indirect impacts to the species. Most pollinators that visit the twinpod are generalists that are not likely to travel more than 0.6 miles from the nesting site (Tepedino 2009). Fugitive dust may also indirectly impact the pollinator species by negatively affecting plant reproduction through stigma competition.

Dust inhibits pollen transfer by coating the stigma. Finally, if the *Physaria* species were to colonize any of the suitable habitat near the Proposed Action, the fragmentation of the surrounding vegetative communities may impact the new populations. Some impact may include an increase in non-native species invasion, fragmentation of pollinator habitat, and possible increase of human disturbance because of easier access on roads used by energy proponents.

Cumulative Effects: The development of this pad and the associated access route will cumulatively increase the fragmentation of the natural communities. There is approximately 25 acres of proposed or previous disturbance from oil and gas development within one mile of the Proposed Action that may cumulatively affect pollinator habitat, nesting sites, and an increase in non-native species establishment. With ground and vegetation disturbance there may be the potential in an increase of a non-native or exotic plant species in the project area. Habitat of the Dudley Bluff species is limited to specific geologic formations and any invasions of non-native species could potentially negatively impact suitable habitat. The closest known *Physaria congesta* population is approximately 2.25 miles south of the project area and potential *Physaria* habitat occurs within 200 meters (656 feet) from the project area. There is the potential that either of the threatened *Physaria* species could expand their range into this previously unoccupied habitat. When considering the recovery and persistence of these species, it is important to reduce invasions of non-native and exotic plant species.

Environmental Consequences of the No Action Alternative:

Direct and Indirect Effects: There would be no direct or indirect impacts to special status plant species or associated habitats under the No Action Alternative.

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

Mitigation:

1. If the project is not initiated within 3 years of the biological survey, all suitable habitat must be re-surveyed. The results of the survey must be provided to the BLM before further ground disturbing activities occur. If occurrences of either federally threatened *Physaria* plant species are found to occur within 600 m of the Proposed Action, then Section 7 consultation with the U.S. Fish and Wildlife Service must be initiated. The results of the consultation may require further mitigation measures to be implemented in the project design.
2. Additionally, two forbs (sulfur flower buckwheat and northern sweetvetch) were added to the BLM recommended seed mix to enhance pollinator habitat in the reclaimed areas (See mitigation in Vegetation). By adding additional forbs in the seed mix, the reclaimed area may support pollinators that lost habitat during the construction phase of the project.

Finding on the Public Land Health Standard #4 for Special Status Species: The Proposed and No-Action alternatives are not expected to affect populations or habitats of plants associated with the Endangered Species Act or BLM sensitive species if mitigation measures are followed. If so, the Proposed Action should have no influence on the status of applicable Land Health Standards.

SPECIAL STATUS ANIMAL SPECIES

Affected Environment: There are no threatened, endangered or candidate animal species that are known to inhabit or derive important use from the project area. The only listed species that has potential to be directly influenced by the Proposed Action is the Colorado pikeminnow. While the species occurs in the White River below Taylor Draw Dam and Kenney Reservoir (over 40 valley miles from the project area), the White River and its 100-year floodplain from Rio Blanco Lake to the Utah state line are designated critical habitat for the pikeminnow. The White River in Colorado does not appear to support spawning activity, young-of-year nurseries, or juvenile concentrations areas for the Colorado pikeminnow. Additionally, while the listed bonytail, humpback chub, and razorback sucker do not occur in the White River, water depletions in the White River adversely affect these species' downstream habitats in the Green River.

Several BLM-sensitive animal species are known to inhabit or may be indirectly influenced by the Proposed Action, including Brewer's sparrow, northern goshawk, Townsend's big-eared bat, big free-tailed bat, spotted bat, fringed myotis, flannelmouth sucker, mountain sucker, roundtail chub, and bluehead sucker.

BLM sensitive aquatic species: The roundtail chub and bluehead sucker are confined to the White River. Additionally, flannelmouth and mountain sucker inhabit the White River but also occur in small numbers at the confluence (and up to one mile upstream) of the White River and Crooked Wash.

Northern Goshawk: Woodlands surrounding the project area are composed of mature pinyon-juniper woodlands ranging in height from 10 ft to 35 ft and provide suitable raptor nesting substrate for woodland raptors, particularly northern goshawk. Based on BLM's experience, goshawks nest at low densities throughout the Basin in mature PJ woodlands above 6,500 ft and Douglas-fir and aspen stands. The WRFO has about six recent records of goshawk nesting in the Piceance Basin, the nearest being over 12 miles from the project area.

BLM-sensitive bat species: Although the distribution of bats in the WRFO is incompletely understood, recent acoustic surveys in the Piceance Basin and along the lower White River have documented the localized presence of Townsend's big-eared and big free-tailed bats along larger perennial waterways. These bats typically use caves, mines, bridges, and unoccupied buildings for night, nursery, and hibernation roosts, but in western Colorado, single or small groups of bats use rock crevices and tree cavities. Rock outcrops which may provide temporary daytime roosts for small numbers of bats are limited in the immediate vicinity of the project area. Mature components of PJ, which can also provide temporary daytime roosts, can be found in the project area. Relatively extensive riparian communities are available along Yellow Creek (more than 5 miles straight line distance from project area). There are no underground mines or known caves or unoccupied buildings in the vicinity of the project area. Birthing and rearing of young for these bats occur in May and June, and young are capable of flight by the end of July. The big free-tailed bat is not known to breed in Colorado.

Brewer's sparrow: Brewer's sparrows are common and widely distributed in virtually all big sagebrush, greasewood, saltbush, and mixed brush communities throughout the Resource Area. These birds are typically one of the most common members of these avian communities and breeding densities generally range between 10-40 pairs per 100 acres. Although most abundant in extensive stands of sagebrush, the birds appear regularly in small (one to two acre) sagebrush parks scattered among area woodlands and it is likely that the sagebrush communities surrounding the project area provide nesting habitat for this species. Typical of most migratory passerines in this area, nesting activities normally take place between mid-May and mid-July. There are no large expanses of sagebrush communities within the immediate vicinity of the project area.

Environmental Consequences of the Proposed Action:

Direct and Indirect Effects:

Endangered Colorado River fish and BLM-sensitive fish species: 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. Implementation of State and federally-imposed design measures to control erosion and spills would limit the risk of contaminants migrating off-site and degrading water quality in the White River.

BLM-Sensitive Bat Species: Due to the limited amount of suitable habitat involved, less than 5 acres of mature pinyon-juniper woodland, the Proposed Action is not expected to have any conceivable influence on BLM-sensitive bat breeding activities, nor would it directly involve habitats that support nesting/roosting functions of these species.

Northern goshawk: Raptor surveys were conducted on April 18, 19, 26, 27, and May 7, 2012 (WWE 2012; see discussion in Terrestrial Wildlife). No nests were observed within the woodland habitats nor were any woodland raptors observed. It is unlikely the removal of 10 acres of habitat would have any conceivable long term influence on northern goshawk breeding activities.

Brewer's sparrow: The Proposed Action would remove roughly 10 acres of pinyon-juniper woodland habitats. Because of the low density of sagebrush in the areas under direct influence of the Proposed Action, it is unlikely that the removal of this habitat will have an influence on Brewer's sparrows. However, the Proposed Action would indirectly affect an additional 62 acres, including small sagebrush parks, through disturbance from increased human activity, vehicle traffic, and construction activities associated with the Proposed Action. Analysis in migratory bird section is also relevant to this species.

Cumulative Effects: Cumulative effects would be similar to those discussed in the *Migratory Bird and Terrestrial Wildlife* sections.

Environmental Consequences of the No Action Alternative:

Direct and Indirect Effects: There would be no direct or indirect impacts to special status animal species under the No Action Alternative.

Cumulative Effects: There would be no contribution to previous or existing disturbances that would potentially impact special status animal species or important habitats under the No Action Alternative.

Mitigation: See *Migratory Bird* section.

Finding on the Public Land Health Standard #4 for Special Status Species: The Land Health Standards for special status animal communities are currently being met in the project area. Neither the Proposed nor No Action Alternatives are expected to detract from continued meeting of these standards.

MIGRATORY BIRDS

Affected Environment: The proposed well pad, pipeline and access road are located on a ridgeline broadly encompassed by a mature pinyon-juniper woodland with an understory dominated by various shrubs, bunchgrass and forb species interspersed with low density sagebrush. These woodland and sagebrush communities provide nesting habitat for a number of bird species during the breeding season (typically mid-May through mid-July).

The BLM lends increased management attention to migratory birds listed by FWS as Birds of Conservation Concern (BCC). These are bird populations that monitoring suggests are undergoing range-wide declining trends and are considered at risk for becoming candidates for listing under the Endangered Species Act (ESA) if not given due consideration in land use decisions. Three pinyon-juniper associated species which likely occur in the project area and are considered BCC include juniper titmouse, Cassin's finch, and pinyon jay. The titmouse and finch occur widely in virtually all available woodlands, but at relatively low densities. Pinyon jays are loosely colonial nesters and are patchily distributed throughout the WRFO's woodlands. This species is reportedly an aggressive and persistent re-nester. BCC associated with sagebrush shrubland habitats is limited to the BLM-sensitive Brewer's sparrow, which is addressed in the

Special Status Animal Species section. No sagebrush habitats would be directly affected or modified by the Proposed Action.

The development of reserve pits that contain drilling fluids have attracted water bird use, at least during the migratory period (i.e., local records: mid-March through late May; mid-October through late November).

Environmental Consequences of the Proposed Action:

Direct and Indirect Effects: Vegetation clearing and subsequent activity associated with well development conducted during the nesting season would cause direct and indirect forms of nest disruption or destruction. The Proposed Action would initially remove approximately ten acres of pinyon-juniper woodland communities with minor sagebrush involvement. Following natural succession regimes, these communities would take anywhere from 20-30 years (sagebrush) and up to 100 – 400 years (depending on age of pinyon-juniper) to return to preconstruction conditions following reclamation. Prompt and effective pad and pipeline reclamation would likely enhance forage and cover availability for certain species.

Impacts to migratory birds would vary depending on construction timeframes. Construction during the winter months would effectively avoid any direct impacts to nesting activities. If drilling activities extend into the spring or summer months returning birds would select nest sites in the face of ongoing activities. Should construction activities be initiated during the nesting season (typically mid-May through mid to late-July) there would be greater potential to influence nesting activities/outcomes including bird displacement, nest abandonment and possible nestling mortality. Activities (pad construction, drilling, increased vehicle traffic) which take place during the breeding season may indirectly influence an additional 62 acres (area within a 100 meter buffer of the PA) of functional forage and nesting habitats due to reductions in nest densities and avoidance of habitats associated with increased human activity, vehicle traffic, and construction activities.

November).

It has been brought to BLM's attention that in certain situations migratory water birds have contacted drilling or frac fluids (i.e., stored in reserve pits) during or after completion operations and are suffering mortality in violation of the Migratory Bird Treaty Act. The extent and nature of the problem is not well defined, but is being actively investigated by the federal agencies and the companies. Until the vectors of mortality are better understood, management measures must be conservative and relegated to preventing bird contact with frac and drilling fluids that may pose a problem.

Cumulative Effects: The Proposed Action is located in an area that is already receiving development activated associated with oil and gas and represents an incremental loss in habitat for migratory birds. The long term loss of roughly 10 acres pinyon-juniper woodland habitat is not anticipated to have a significant influence on local bird populations as there is suitable habitat adjacent to the project area.

Following interim reclamation, approximately 2 acres would remain disturbed for the long-term. Prompt and effective reclamation would promote a healthier, diverse plant community which may potentially benefit local wildlife populations through forage and cover.

Environmental Consequences of the No Action Alternative:

Direct and Indirect Effects: There would be no direct or indirect impacts to migratory bird species or important habitats under the No Action Alternative.

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

Mitigation:

1. Vegetation removal associated with well pad, road and pipeline development will take place outside the migratory bird nesting season of May 15 through July 15.
2. Although reserve pits are not planned with this project, in the event that they are built the operator shall prevent use by migratory birds of reserve pits that store or are expected to store fluids which may pose a risk to migratory waterfowl, shorebirds, wading birds and raptors during completion and after completion activities have ceased. Methods may include netting or other alternative methods that effectively prevent use and that meet BLM approval. It will be the responsibility of the operator to notify the BLM of the method that will be used to prevent use two weeks prior to when completion activities are expected to begin. The BLM approved method will be applied within 24 hours after completion.

TERRESTRIAL WILDLIFE

Affected Environment: The Proposed Action originates from RBC 122, a native surface road that receives considerable year-round vehicle use. The lower elevation pinyon-juniper woodland and sagebrush communities that encompass the project area are categorized by Colorado Parks and Wildlife as both elk and mule deer general winter range. These ranges typically receive heaviest use from October through April.

Mature components of pinyon-juniper woodlands which surround the proposed pad location, pipeline and access road may provide suitable nest substrate for woodland raptors (accipitrine and buteo species, long-eared and saw-whet owls). Raptor breeding season begins mid-February and lasts until mid-August.

The distribution and abundance of small mammal populations are poorly documented within the Resource Area. Recent trapping efforts undertaken throughout Piceance Basin indicate a high tendency in both sagebrush and pinyon-juniper communities for more generalized species such as deer mouse and least chipmunk and it is suspected that these species would be relatively abundant in the project area. There are no small mammal species that are narrowly endemic or highly specialized species known to inhabit the project area.

Environmental Consequences of the Proposed Action:

Direct and Indirect Effects: The Proposed Action would remove approximately 10 acres of predominately pinyon-juniper woodland communities that provide forage and cover resources for local wildlife populations. Following interim reclamation slightly under two acres would remain disturbed for the life of the project. With successful reclamation, bunchgrasses and forbs, which can provide forage and cover for terrestrial wildlife, would dominate these areas within

two to four years. Sagebrush communities could take up to 30 years and pinyon-juniper communities would take 100 to 400 years to return to pre-construction condition.

Should construction activities take place during the winter months there would be greater potential to displace big game as both deer and elk tend to congregate in the surrounding lower elevation pinyon-juniper and sagebrush habitats during these time frames. Increased vehicle traffic, noise and human activity, particularly during the construction and drilling phase would have the greatest potential to displace local wildlife (contributing to increased energetic demands); however, due to the clustered development of existing activity and limited amount of development in the surrounding area, it is suspected that local big game populations would have adequate forage and cover resources available. Local wildlife would be expected to return to the area once drilling has ceased.

Pinyon-juniper habitat that could potentially provide suitable nesting substrate that was within 0.25 of the project area was surveyed for raptor use April 18, 19, 26, 27, and May 7, 2012. There were no suitable cliffs within 0.50 miles of the Proposed Action. No nests were located and there were no incidental raptor sightings. It is not suspected that the Proposed Action would have any significant effect on nesting raptor species.

Cumulative Effects: The Proposed Action in and of itself is not anticipated to contribute substantially to existing or proposed disturbances, nor is expected to have any measureable influence on local terrestrial wildlife populations. While this would represent an incremental loss in big game winter range, development in the vicinity of the project area is clustered along an existing county road and there is suitable habitat adjacent to the project area. Although unknown at this time, potential for future development is probable. Increased and expansive development in this area would be expected to contribute to reductions in important big game wintering habitat with potential negative consequences for local big game populations.

Environmental Consequences of the No Action Alternative:

Direct and Indirect Effects: There would be no direct or indirect impacts to terrestrial wildlife species under the No Action Alternative.

Cumulative Effects: There would be no contribution to previous or existing disturbances that would potentially impact terrestrial wildlife species or habitats under the No Action Alternative.

Mitigation:

1. See reclamation standards in the vegetation section.

Finding on the Public Land Health Standard #3 for Plant and Animal Communities: The Land Health Standards for animal communities are currently being met in the project area. Neither the Proposed nor No Action Alternatives are expected to detract from the continued meeting of the Land Health Standards.

WILD HORSES

Affected Environment: The proposed project is located within the Pinto Mesa portion of the 190,130 acre Piceance-East Douglas Herd Management Area (HMA). This portion of the HMA, which contains prime year-long wild horse habitat, is primarily comprised of pinyon-juniper woodlands with sagebrush draws and close proximity to previously manipulated landscapes from wildland fires or mechanical brush treatments. Pinyon-juniper woodlands provide cover habitat required by the wild horses. Use of this cover type is more predominant during the summer months for shade and during severe winter storms. Forage competition between wild horses, livestock, and wildlife species exists throughout the proposed project area.

The movement of wild horses in the HMA is largely influenced by seasonal factors, fences, access to water supplies, and available forage. Wild horses tend to concentrate on windswept ridges and south-facing slopes during periods of deep snow. During summer and early fall, water availability influences wild horse movement. Fences used to control livestock or built as enclosures can deter the free-roaming behavior of the herd and are not allowed. However, fences such as the enclosure fence in Duck Creek, lying south and east of the proposed project area, includes water gaps placed in appropriate locations to allow for both water access and passage from one side to the other.

The current appropriate management level (AML) range for the HMA is 135-235 wild horses. Based on population models for the herd, an estimated population for the herd is around 225 animals. To maintain the AML, the BLM occasionally gathers and removes the excess wild horses and offers them to the public through an adoption program. The next wild horse gather for this HMA may occur in the fall of 2016.

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 10.4 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 will make an effort to avoid the area during the active construction phase. For wild horses that do 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 not be considered long term, however, temporary impacts would be limited to the period during construction as well as intermittent impacts from fugitive dust occurring when road ways would be in use after construction.

This proposed well location could affect the Piceance-East Douglas wild horse herd; 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 action 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 10.4 acres of habitat cover and forage in the portion of the HMA in the proposed project area. 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. 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 in 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 8.5 acres of the estimated 10.4 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 8.5 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.

Environmental Consequences of the No Action Alternative: There would be no impacts to the HMA or the wild horse herd with a No Action Alternative.

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 scheduled during the same time as the gather. 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. If cattle guards are placed on this location they will be “horseproof” cattle guards that are constructed and maintained, as directed by the BLM, to reduce the potential for injuries to wild horses. Specifically, sucker rod or rebar should be centered between the rails and welded at each cross member for the entire length and width of the cattle guard. “Horseproof” cattle guards would be painted a dark color to help with snow melt.
 3. In wild horse use area while the trenches are open, prior to the burial of the pipeline, the trench should be inspected daily to reduce the potential for wild horses to become trapped should they fall into a trench.
 4. 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.
 5. 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 area of the proposed well pad, access road and well tie pipelines has been inventoried at the Class III (100 percent pedestrian) level (Conner et al. 2010 compliance dated 2/11/2011). There were no cultural resources identified within the immediate project area. However there are cultural resources in the general vicinity.

Environmental Consequences of the Proposed Action:

Direct and Indirect Effects: Construction of the proposed well pad, access route and well tie pipelines will not directly impact any known cultural resources. However, there is a site approximately 375 feet (114 meters) from the proposed access road and well tie pipelines. There is a potential for impacts to the site due to improved access to the area and increased human presence in the area due to development activities. This increased human activity could include unauthorized collection of artifacts from the site.

Altered land forms and inadequate storm water management or reclamation could increase the potential for erosion which may or may not affect the site. Should erosion impact the site there would be a loss of context and possibly the removal of smaller and lighter artifacts.

Cumulative Effects: Indirect impacts from the development could result in an irretrievable and irreversible loss of data from the regional archaeological database. The loss would include contextual data as well as any artifacts that might be lost due to erosion or unauthorized collection

Environmental Consequences of the No Action Alternative:

Direct and Indirect Effects: There would not be any new construction related impacts to cultural resources under the No Action Alternative. There would not be improved access into the

area which would reduce the increased human impacts to the area which might reduce the likelihood of unauthorized artifact collection and resultant loss of data from the regional archaeological database.

The normal weathering process that has taken place since the archaeological sites were abandoned by people would continue as they have for decades if not centuries causing a slow loss of soil and archaeological context

Cumulative Effects: There would be a very slow natural weathering of archaeological resources which results in a slow but irreversible and irretrievable loss of data to the regional archaeological database. The weathering processes are fairly well understood and while some data will be lost researchers can still recover significant information for the regional archaeological database.

Mitigation:

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

PALEONTOLOGICAL RESOURCES

Affected Environment: The proposed wells, access route and well tie pipelines are in an area generally mapped as the Uintah Formation (Tweto 1979) which the BLM, WRFO has classified as Potential Fossil Yield Classification (PFYC) 5 formation. PFYC 5 formations are well known for producing scientifically noteworthy fossil resources (c.f. Armstrong and Wolny 1989, Daitch et al 2009)

Environmental Consequences of the Proposed Action:

Direct and Indirect Effects: If it becomes necessary to excavate into the underlying sedimentary rock formation to level the well pad, excavate the reserve/bloolie/cuttings or bury any of the well tie pipelines there is a fairly high potential to impact scientifically noteworthy fossil resources. Direct impacts to fossils and their context can occur as rock is broken up and moved to create the well pad, pits and pipeline trenches. Indirect impacts could result from increased human activity in the area resulting in unauthorized collection of recently exposed fossils. Increased erosion could also impact fossils when the ground is exposed and soils are loosened making it easier for water and wind to remove soil and the smaller fossils that might be present in the formation. Water can also move larger fossils during severe rain events. Water movement can displace fossils and also tumble them during transport abrading away fragile and often diagnostic features of the remains.

Cumulative Effects: Any impacts to fossil resources as a result of development will represent an irreversible and irretrievable loss of scientific data from the regional paleontological database. Recovery of fossils and contextual data during project monitoring will recover some data but there will still be a permanent loss. The loss will be greater if smaller fossils happen to be present at the location.

Environmental Consequences of the No Action Alternative:

Direct and Indirect Effects: There would be no new construction related impacts to fossil resources under the No Action Alternative.. There would likely not be an increase in human presence and activity in the area and the likelihood of unauthorized collection of fossil would be reduced compared to the proposed Action. Normal weathering of the formation would continue at the slow pace that has been the norm for many centuries.

Cumulative Effects: There would be a slow weathering of the formation which gradually exposes large and small fossils. Smaller more fragile fossil would be lost more quickly and larger fossils would be degraded as they weather. Paleontological prospecting in the area by interested researchers could recover some data before it is irreversibly and irretrievably lost the regional paleontological data base but, there would still be a small loss of data.

Mitigation:

1. WPX 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 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, WPX 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: The Proposed Action is located within a Visual Resource Management (VRM) Class III area. The objective of the VRM Class III is to partially retain the existing character of the landscape. The level of change to the characteristic landscape 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 project area consists of flat to sloping and undulating terrain. This area is primarily covered with scattered pinyon and juniper with some grasses and scrubs along Rio Blanco CR 122 and in the bottom of the drainages. Color tones are typical of the area, with a contrast of soil and vegetation. Generally the soils are tan and grey with dark and light green colors in the more heavily vegetated areas. Some existing roads, oil and gas facilities, and utility Right of Ways (ROWs) have created impacts to the form, line, and color that affect the natural appearance of the landscape.

Environmental Consequences of the Proposed Action:

Direct and Indirect Effects: Due to the nature of the Proposed Action, vegetation will be removed from the well pad locations, pipelines and roads. The contrast between the disturbed surfaces and the surrounding vegetation may attract the attention of the casual observer traveling Rio Blanco County Road (RBCR) 122. Public traveling RBCR 122 will generally be oil and gas employees, ranchers, and big game hunters in the fall. The greatest anticipated contrast would occur during the construction and drilling phases when the activity and color of the equipment area are at the highest concentration.

Post-completion of the wells, it is proposed by the applicant that the well pad locations will be reclaimed to necessary working surfaces then seeded with a BLM approved seed mix. Once the well pad is reclaimed and revegetated, and all permanent structures painted with an approved natural color to mimic the surrounding landscape, the level of change to the landscape characteristics would be low, thus the objectives of the VRM III classification would be retained.

Cumulative Effects: Combined with other ongoing oil and gas 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: As the Proposed Action would not occur, no impacts are expected.

Cumulative Effects: None have been identified.

Mitigation:

1. 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.

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.

Environmental Consequences of the Proposed Action: The proposed activities may use regulated materials and will generate some solid and sanitary wastes. The potential for harm to human health or the environment is presented by the risks associated with spills of fuel, oil and/or hazardous substances used during oil and gas operations. Other accidents and mechanical breakdowns of machinery are also possible.

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 man-made materials used in oil and gas operations through the use and cementing of surface casing, see 43 CFR §3162.5-2(d).

Environmental Consequences of the No Action Alternative: No hazardous or other solid wastes would be generated under the no-action alternative.

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. All lessees and/or operators and right-of-way holders shall 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.
3. 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.
4. 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).

5. Through all phases of oil and gas exploration, development, and production, all lessees and/or operators and holders of rights-of-way shall employ, maintain, and periodically update to the best available technology(s) aimed at reducing: 1) emissions, 2) fresh water use, and 3) utilization, production, and release of hazardous material.
6. 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.
7. 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.
8. 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.
9. 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.
10. With the acceptance of this authorization, the commencement of operations under this authorization, or within thirty calendar days from the issuance of this authorization, whichever occurs first, and during the life of the pipeline, the right-of-way holder and the lessee/operator, and through the right-of-way holder and lessee/operator, its agents, employees, subcontractors, successors and assigns, stipulate and agree to indemnify, defend and hold harmless the United States Government, its agencies, and employees from all liability associated with the emission or release of substances that pose a risk of harm to human health or the environment.

FIRE MANAGEMENT

Affected Environment: The Proposed Action is located within B6 Yellow Creek fire management polygon with a vegetation composition of primarily pinyon-juniper woodland, Wyoming big sagebrush, and greasewood. The resource management objective is to manage naturally ignited fires throughout this polygon to promote a vegetation mosaic with varying successional stages. Natural fire management objectives are emphasized in order to benefit multiple resource goals when prescriptive parameters allow. Natural ignitions in this polygon

may be encouraged up to 200 acres as long as known cultural sites are protected. 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. In the past ten years there have been two fires over ten acres within two miles of the proposed project. In 2001, the 88 acre Raisin fire was less than one half mile from the proposed project. Since 2000 there have been twenty nine fires within two miles of the proposed project ranging in size from one tenth acre to two acres in size.

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 will 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. If drilling operations decrease perhaps fire and resource managers will 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 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. 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.
2. 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.

3. 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.
4. To avoid jack pots of fuel on site, vegetation which is not to be used for storm water management or erosion control shall be chipped and mixed with topsoil for future redistribution.

FOREST MANAGEMENT

Affected Environment: The Proposed Action is located within a productive exposure stand classes of pinyon-juniper woodlands as defined by a survey performed by WRFO personnel from 2003-2005. Productive exposure types occur on primarily lower gradient slopes and north and east aspects. Growth rates are higher in these areas due to soil features which allow for effective use of precipitation. These habitat types are further broken down based on the age class of the stand. In this case the affected stand age class is mature. Mature pinyon-juniper trees on productive exposure establish themselves as the dominant plant community on the site. Mature stands are valuable locally as a source of fire wood.

Environmental Consequences of the Proposed Action:

Direct and Indirect Effects: The following table (Table 8) shows the estimated loss of woodland acres as a result of the Proposed Action. Following reclamation, it is expected that pinyon and juniper will invade the site within 50-70 years and would develop a mature stand within 250-350 years. Under the Proposed Action about 10.4 acres of pinyon-juniper woodlands would be removed. The loss of pinyon-juniper woodlands would adversely affect wildlife and nesting habitat. Impacts would be long-term until woodlands regenerate successfully.

Table 8. Estimated Loss of Woodland Acres as a Result of the Proposed Action

Well Name	Acreage In Woodlands				
	Pad Acres	Access Rd. and Pipeline (Ac)	Acres Disturbed (Total)	Stand Class	Total Cords
BCU 442-36-199 well pad	6.4	4	10.4	PJ-PE-M*	72.8

*PJ = Pinyon-juniper, PE= Productive Exposure, M= Mature Stand Age Class

Cumulative Effects: Removal of mature aged juniper trees would reduce the potential for outbreak of woodland diseases and pest infestations. By reducing the stand size of juniper trees in areas historically included in sagebrush and grass communities, it would increase the open areas preferred as foraging areas by wildlife and livestock. Acceptance of mitigation measures outlined for fire and forest management would reduce the build-up of cleared woody material from the Project Area, reducing the likelihood of slash contributing to possible large fire.

Environmental Consequences of the No Action Alternative: Under this alternative there would be no construction of a wellpad, access road or a pipeline and no removal of pinyon-juniper woodlands.

Mitigation:

1. In accordance with the 1997 White River RMP/ROD, all trees removed in the process of construction shall be purchased from the BLM. Trees should first be used in reclamation efforts and then any excess material made available for firewood or other uses.
 - a) First, woody material will be chipped and stockpiled for later use in reclamation. Woods chips can be incorporated into the topsoil layer to add an organic component to the soil to aid in reclamation success.
 - b) Woody materials, not used for woods chips, required for reclamation shall be removed in whole with limbs intact and shall be stockpiled along the margins of the authorized use area separate from the topsoil piles. Once the disturbance has been recontoured and reseeded, stockpiled woody material shall be scattered across the reclaimed area where the material originated. Redistribution of woody debris will not exceed 20-30% ground cover. Limbed material shall be scattered across reclaimed areas in a manner that avoids the development of a mulch layer that suppresses growth or reproduction of desirable vegetation. Woody material will be distributed in such a way to avoid large concentrations of heavy fuels and to effectively deter vehicle use.
 - c) Woody materials that are to be stockpiled along margins and not used in the topsoil should not exceed pile dimensions of 8 x 8 x 8 feet. Materials used in the stockpiles should be a variety of diameters, but should be no smaller than 6 inches in diameter. Additionally the piles should be no less than 30 feet apart.
2. Trees that must be removed for construction and are not required for reclamation shall be cut down to a stump height of 6 inches or less prior to other heavy equipment operation. These trees shall be cut in four foot lengths (down to 4 inches diameter) and placed in manageable stacks immediately adjacent to a public road to facilitate removal for company use or removal by the public.
3. During pad, road, and pipeline layout, consideration will be given to maintaining old-growth stands in their entirety. Old-growth stands will be those with trees containing individuals of age greater than 300 years and having old-growth stature and development.

RANGELAND MANAGEMENT

Affected Environment: The proposed project occurs entirely within the Barcus-Pinto pasture of the Yellow Creek (06030) allotment. Use in this pasture of the allotment is outlined in Table 9. There are no range improvements or long-term monitoring plots present within the vicinity of the proposed project.

Table 9: Permitted livestock use in the Barcus-Pinto Pasture of the Yellow Creek Allotment.

ALLOTMENT			LIVESTOCK		GRAZING PERIOD		
Number	Name	Pasture	Number	Kind	Begin	End	%PL
6030	Yellow Creek	Barcus-Pinto	240	Cattle	1-May	15-May	100
6030	Yellow Creek	Barcus-Pinto	340	Cattle	16-May	30-Jun	100
6030	Yellow Creek	Barcus-Pinto	340	Cattle	16-Oct	30-Dec	100

Environmental Consequences of the Proposed Action:

Direct and Indirect Effects: Construction of the well pad, road, and pipeline would require the complete removal of vegetation on 10.4 acres used for livestock grazing. Only 1.9 acres is expected to be long-term disturbance (20-30 years), and the remainder of the project area will go into interim reclamation (well pad), or final reclamation (pipeline/edge of road). Short-term losses in forage will be off-set by successful reclamation on the project area. Adequate reclamation could potentially improve forage availability and quality around the project area by decreasing the over-story (pinyon-juniper) and increasing the herbaceous understory.

Construction activities do have the potential to impact grazing operation by changing livestock dispersal and use patterns. Changes in use patterns can result in excessive use in other areas of the allotment. There is also a risk of livestock being killed during construction activities from heavy equipment.

Cumulative Effects: The project area has experienced a high level of oil and gas development in the past and currently. Development is expected to continue into the future in the area. Most oil and gas development does require the removal of vegetation during the construction phase resulting in short-term losses in forage. Some development does require a long-term loss in forage until oil and gas production is complete (20-30 years). This one project will only create a long-term disturbance/reduction in forage on 1.9 acres which is nominal given the size of the allotment. However, cumulative impacts from oil and gas development in the area could result in a loss of forage on the allotment which would be analyzed during the permit renewal process.

Environmental Consequences of the No Action Alternative:

Direct and Indirect Effects: The No Action alternative will result in no impacts to rangeland management. Under the No Action alternative, the well pad, pipeline, and road will not be constructed resulting in loss of forage.

Cumulative Effects: There would be no contribution to previous or existing disturbances that would potentially impact rangeland management under the No Action Alternative.

Mitigation:

1. Any range improvement projects such as 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 the Proposed Action shall be promptly repaired or replaced by the applicant to restore pre-disturbance functionality.
2. The applicant shall notify the permittee authorized to graze livestock within the project area or the WRFO Range Management staff of planned construction activities 72 hours prior to beginning construction.

REALTY AUTHORIZATIONS

Affected Environment: The natural gas pipeline and temporary work areas will be authorized to Bargath, LLC; therefore, a ROW is required. The water pipeline and access road are located within the Barcus Creek Unit, and the water pipeline will transport only on-unit water; therefore, ROWs are not required. The following table describes the existing ROWs in the area of the proposed well pad, natural gas pipeline, and water pipeline.

Table 10. Existing ROWs in the Project Area

Case File	Holder	Authorized Use
COC15835	BLM White River Field Office	Road
COC71418	Bargath LLC	Natural gas pipeline
COC71418-01		Temporary use permit
COC74877		Natural gas pipeline
COC73886	WPX Energy Rocky Mountain LLC	Water pipelines
COC74878		

Environmental Consequences of the Proposed Action:

Direct and Indirect Effects: The natural gas pipeline ROW COC75934 would be approximately 2,330 ft long, 40 ft wide, and contain 2.14 acres. The temporary use permit would be 2,330 ft long, 35 ft wide, and contain 1.87 acres. The access road to the BCU 442-36-199 well pad would be included in the working surface for construction of approximately 1,220 ft of the natural gas pipeline. 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. All activities would be required to comply with all applicable local, state, and federal laws, statutes, regulations, standards, and implementation plans. This would include acquiring all required State and Rio Blanco County permits, implementing all applicable mitigation measures required by each permit, and effectively coordinating with existing facility ROW holders.

2. 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.
3. Construction activity should take place entirely within the areas authorized in the ROW grant and temporary use permit.
4. 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.

RECREATION

Affected Environment: The Proposed Action occurs within the White River Extensive Recreation Management Area (ERMA). 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 minimum 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 with a relatively low level of intensity. The Proposed Action is located within the CDOW Game Management Unit (GMU) 22, which is a popular big game hunting area where the hunter has good opportunities to pursue both mule deer and elk. Special Recreation Permits in this area include one authorized for commercial guided Big Game hunting and 11 authorized for commercial guided mountain lion hunting.

Environmental Consequences of the Proposed Action:

Direct and Indirect Effects: Some displacement of recreationists may occur during construction, particularly to those seeking a more primitive oriented backcountry recreation experience. Post construction, big game hunters are still expected to hunt in the general vicinity of the wells assuming big game is present in the area. If pad development and drilling activities coincide with the various hunting seasons (late August through December), there may be a

disruption to the hunting experience, however this disruption will be temporary in nature and of short duration. As such, this could be considered a minor impact.

Cumulative Effects: Combined with other ongoing oil and gas development activities in the area, the Proposed Action may begin to contribute to an increasingly impacted recreation experience.

Environmental Consequences of the No Action Alternative:

Direct and Indirect Effects: There would be no activities that would redirect recreational use in the area.

Cumulative Effects: None

Mitigation: None.

ACCESS AND TRANSPORTATION

Affected Environment: The access to the Proposed Action is along Rio Blanco CR 122. RBCR122 is a natural surfaced road and accommodates large amounts of heavy truck traffic associated with development of natural gas in the Barcus Creek area. Access to this pad location comes from either the east or west traveling along Rio Blanco CR 122. The primary use of RBCR 122 involves natural gas development traffic, and traffic associated with dispersed recreation, primarily hunting, camping and OHV use.

Environmental Consequences of the Proposed Action:

Direct and Indirect Effects: A minor increase in traffic volume along Rio Blanco CR 122 would be expected during the life of the wells, with short-term temporary increases concentrated during construction and drilling. An increase of construction traffic during dry periods is likely to result in an increase in fugitive dust. An increase in traffic during sensitive wildlife use periods may negatively impact wildlife resources. These impacts are discussed in further detail in the *Wildlife, Terrestrial* section. During the production period, these same types of impacts would be expected to be low and long-term given the less concentrated traffic and decreased use of heavy equipment compared to the construction period. The short access road to the wells does not penetrate roadless areas and would not create public access in previously inaccessible areas. It is unlikely that the project area would experience greatly increased levels of traffic by the public as a result of the Proposed Action.

Cumulative Effects: Access and transportation routes would likely increase as other oil and gas leases in the area are developed.

Environmental Consequences of the No Action Alternative:

Direct and Indirect Effects: There would be no increase in traffic or changes to public land access. Roads would continue to be accessed or improved by other activities in the area.

Cumulative Effects: Access and transportation from oil and gas development activities in the area would continue.

Mitigation: None

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CDPHE-WQCC

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TRIBES, INDIVIDUALS, ORGANIZATIONS, OR AGENCIES CONSULTED:

State Historic Preservation Office (SHPO) was consulted in 2011.

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	1/18/2013
Baili Foster	Ecologist Intern	Areas of Critical Environmental Concern; Special Status Plant Species	1/8/2013
Michael Selle	Archaeologist	Cultural Resources; Native American Religious Concerns; Paleontological Resources	12/18/2012
Heather Woodruff	Forest Specialist	Forest Management	1/2/2013
Matthew Dupire	Rangeland Management Specialist	Invasive, Non-Native Species; Vegetation; Rangeland Management	1/31/2013
Laura Dixon	Wildlife Biologist	Migratory Birds; Special Status Animal Species; Terrestrial and Aquatic Wildlife; Wetlands and Riparian Zones	12/27/2012
Christina Ashley	Natural Resource Specialist	Hazardous or Solid Wastes	1/31/2013
Aaron Grimes	Outdoor Recreation Planner	Wilderness; Visual Resources; Access and Transportation; Recreation,	1/2/13
Scott Nilson	Fuels Specialist	Fire Management	12/18/2012
Paul Daggett	Mining Engineer	Geology and Minerals	1/14/2013
Stacey Burke	Realty Specialist	Realty	1/14/2013
Melissa J. Kindall	Range Technician	Wild Horse Management	1/29/2013
Christina Ashley	Natural Resource Specialist	Project Lead – Document Preparer	1/31/2013
Paul Kelley	Supervisory Natural Resource Specialist	NEPA Compliance	2/7/13

ATTACHMENTS: TRIBES, INDIVIDUALS, ORGANIZATIONS, OR AGENCIES CONSULTED:

Figure 1: Plan of Development Map

Attachment 1: Surface Use Plan

Attachment 2. APD Deficiencies Addressed

Attachment 3. Revised Pipeline Route

**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-110-2012-0140-EA**

BACKGROUND

WPX Energy Rocky Mountain LLC (WPX) proposes to construct, drill, operate and maintain four new wells (Barcus Creek Unit (BCU) 33-36-198, BCU 341-36-199, BCU 532-36-199, and BCU 442-36-199) from the BCU 442-36-199 well pad. Construction of the well pad (including installation of stormwater features) would require 6.4 acres of initial surface disturbance during construction. The well pad would be reclaimed down to 1.3 acres within six months of well completions. WPX proposes to construct 1,220ft of new access road, and initial construction (with a 75ft ROW and 24ft construction width) would result in up to 0.7 acres of initial disturbance. The road would be reclaimed down to a 20ft visible surface during the production phase. The road would result in 0.6 acres of surface disturbance after the construction corridor is reclaimed to leave only the traveling surface of the road.

A new eight inch gas line and a new four inch water line would be buried from the existing infrastructure located on the north side of County Road (CR) 122 (at the intersection of the CR and the access road to the existing BCU 12-31-198 pad) to the pad following the CR and the proposed access road, as shown on the Plan of Development Map. The approximate length of the route would be 2,330ft. The total Right-of-Way (ROW) width requested is 75ft with 40ft being permanent. A summary of the total surface disturbance that would be required to construct the well pad and associated infrastructure is summarized below in Table 1 below. A total of 11.1 acres of surface disturbance resulting during construction would be reclaimed down to 1.9 acres during production, and all surface disturbance would be completely reclaimed at the time of the well abandonment.

FINDING OF NO SIGNIFICANT IMPACT

Based on the analysis of potential environmental impacts contained in the attached environmental assessment, and considering the significance criteria in 40 CFR 1508.27, I have determined that the Proposed Action will not have a significant effect on the human environment. An environmental impact statement is therefore not required.

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.

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 depletion of the subsurface petroleum reservoir in general is a beneficial impact that adds to domestic energy reserves. 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.

Proper and effective implementation of the proposed reclamation techniques could provide beneficial diversity to the currently existing plant community. The site location for the proposed well has been described as having a component of invasive, annual cheatgrass. While surface impacts would be short-term and of low intensity, improper implementation of approved techniques for construction and reclamation has potential to adversely impact surface resources at a higher intensity and time duration than anticipated.

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.

There would be no impact to public health and safety. All aspects of the APD are in compliance with required rules and regulations designed to protect public health and safety. The operator has self-certified their knowledge of rules and regulations related to all aspects of the proposed action, and those rules and regulations necessarily include those designed to protect public health and safety. The WRFO inspection program is designed to identify compliance issues. Drilling, production, and environmental inspections are performed to ensure compliance with the conditions under which the operations are permitted.

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 prime farmlands, parklands, or scenic rivers occur in the project area. Wetlands were identified within the project area where proposed upgrades to the existing road would occur.

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 concerning single well-pad developments.

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 well 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. Impacts to cultural resources in the general vicinity have been mitigated.

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.

Dudley Bluffs bladderpod (*Physaria congesta*) and Dudley Bluffs twinpod (*Physaria obcordata*) are known to occur in the vicinity of the Proposed Action. The closest known occurrence of Dudley Bluffs bladderpod is near Duck Creek, on the 13-mile Creek Tongue, approximately 2.25 miles south of the project area. There should be no conceivable direct impacts to either of the federally listed *Physaria* species because of the distance of the Proposed Action to the nearest known population.

Mitigation is provided to reduce impact to special status animal species. 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 impacts associated with it violate any laws or requirements imposed for the protection of the environment.

SIGNATURE OF AUTHORIZED OFFICIAL:


Field Manager
FOR

DATE SIGNED: 2/13/2013

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 four APDs on new well pad BCU 442-36-199

ENVIRONMENTAL ASSESSMENT NUMBER: DOI-BLM-CO-2012-0140-EA

DECISION

It is my decision to implement the Proposed Action (Alternative A), as mitigated in DOI-BLM-CO-2012-0140-EA, authorizing the construction, drilling, operation, and maintenance of the BCU 442-36-199 well pad and four wells, with the following mitigation.

Mitigation Measures

Timing Limitations

- 1) If the project is not initiated within 3 years of the biological survey, all suitable habitat must be re-surveyed. The results of the survey must be provided to the BLM before further ground disturbing activities occur. If occurrences of either federally threatened Physaria plant species are found to occur within 600 m of the Proposed Action, then Section 7 consultation with the U.S. Fish and Wildlife Service must be initiated. The results of the consultation may require further mitigation measures to be implemented in the project design.
- 2) Vegetation removal associated with well pad, road and pipeline development will take place outside the migratory bird nesting season of May 15 through July 15.

Pre-Construction Activities and Notifications

- 3) 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.

Resource-Specific Mitigation During Construction, Drilling, and Production:

Air Quality

- 4) WPX will 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.
- 5) 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.

Soils

- 6) In order to protect rangeland health standards for soils, erosion features such as rilling, gullyng, piping and mass wasting on the surface disturbance or adjacent to the surface

disturbance as a result of this action 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.

- 7) All construction activity shall cease when soils or road surfaces become saturated to a depth of three inches unless approved by the AO.

Range Management

- 8) Any range improvement projects such as 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 the Proposed Action shall be promptly repaired or replaced by the applicant to restore pre-disturbance functionality.
- 9) The applicant shall notify the permittee authorized to graze livestock within the project area or the WRFO Range Management staff of planned construction activities 72 hours prior to beginning construction.

Surface and Ground Water Quality

- 10) To protect surface waters below the project area, 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.
- 11) Install culverts and low-water crossings with adequate armoring of inlet and outlet. Patrol areas susceptible to road or watershed damage during periods of high runoff.
- 12) Locate drainage dips and drainage ditches in such a manner as to avoid discharge onto unstable terrain such as headwalls or slumps. Provide adequate spacing to avoid accumulation of water in ditches or dips.
- 13) 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 (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).

Wild Horses

- 14) 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 scheduled during the same time as the gather. 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.

- 15) If cattle guards are placed on this location they will be “horseproof” cattle guards that are constructed and maintained, as directed by the BLM, to reduce the potential for injuries to wild horses. Specifically, sucker rod or rebar should be centered between the rails and welded at each cross member for the entire length and width of the cattle guard. “Horseproof” cattle guards would be painted a dark color to help with snow melt.
- 16) In wild horse use area while the trenches are open, prior to the burial of the pipeline, the trench should be inspected daily to reduce the potential for wild horses to become trapped should they fall into a trench.
- 17) 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.
- 18) 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

- 19) WPX 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.
- 20) 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. 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 option 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.
- 21) Pursuant to 43 CFR 10.4(g), WPX 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), WPX must stop activities in the vicinity of the discovery and protect it for 30 days or until notified to proceed by the AO.

Paleontological Resources

- 22) WPX 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 fossils, collecting large amounts of petrified wood (over 25lbs./day, up to 250lbs./year), or collecting fossils for commercial purposes on public lands.
- 23) If any paleontological resources are discovered as a result of operations under this authorization, WPX 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.

- 24) 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.

Hazardous Materials

- 25) 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 .
- 26) All lessees and/or operators and right-of-way holders shall 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.
- 27) 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.
- 28) 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).
- 29) Through all phases of oil and gas exploration, development, and production, all lessees and/or operators and holders of rights-of-way shall employ, maintain, and periodically update to the best available technology(s) aimed at reducing: 1) emissions, 2) fresh water use, and 3) utilization, production, and release of hazardous material.
- 30) 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.

- 31) 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.
- 32) 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.
- 33) 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.
- 34) With the acceptance of this authorization, the commencement of operations under this authorization, or within thirty calendar days from the issuance of this authorization, whichever occurs first, and during the life of the pipeline, the right-of-way holder and the lessee/operator, and through the right-of-way holder and lessee/operator, its agents, employees, subcontractors, successors and assigns, stipulate and agree to indemnify, defend and hold harmless the United States Government, its agencies, and employees from all liability associated with the emission.

Fire Management

- 35) When working on lands administered by the BLM WRFO, 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.
- 36) 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.
- 37) 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.

38) To avoid jack pots of fuel on site, vegetation which is not to be used for storm water management or erosion control shall be chipped and mixed with topsoil for future redistribution.

Realty Authorizations

39) All activities would be required to comply with all applicable local, state, and federal laws, statutes, regulations, standards, and implementation plans. This would include acquiring all required State and Rio Blanco County permits, implementing all applicable mitigation measures required by each permit, and effectively coordinating with existing facility ROW holders.

40) 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.

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

42) 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.

Reclamation and Weed Management

43) BLM recommends the use of WRFO modified native seed mix #3 for all reclamation in the project area.

White River Field Office Modified Native Seed Mix #3

Species	Seeding Rate Pure Live Seed (PLS)*
Western wheatgrass (Rosana)	3 lb/ac. PLS
Indian ricegrass (Rimrock)	3 lb/ac. PLS
Bluebunch wheatgrass (Whitmar)	3.5 lb/ac. PLS
Needle and Thread Grass	2.5 lb/ac. PLS

White River Field Office Modified Native Seed Mix #3

Species	Seeding Rate Pure Live Seed (PLS)*
Scarlet Globemallow	0.5 lb/ac. PLS
Sulphur Flower Buckwheat	1.5 lb/ac. PLS
Lewis Flax (Maple Grove)	1 lb/ac. PLS
Northern Sweetvetch	2 lb/ac. PLS
Sulphur Flower Buckwheat	1 lb/ac. PLS

* Seeding rate is for drilled seeding; for broadcast seeding the rate should be doubled

- 44) The operator will be required to manage weeds that establish on the project area.
- 45) If herbicides are to be used to manage weeds, an approved pesticide use proposal (PUP) will need to be completed and submitted to the WRFO before any application can take place.
- 46) Construction equipment will be thoroughly washed prior to being brought on site to minimized the risk of weed seeds and propogules being brought to the project area.
- 47) In accordance with the 1997 White River RMP/ROD, all trees removed in the process of construction shall be purchased from the BLM. Trees should first be used in reclamation efforts and then any excess material made available for firewood or other uses.
 - a) First, woody material will be chipped and stockpiled for later use in reclamation. Woods chips can be incorporated into the topsoil layer to add an organic component to the soil to aid in reclamation success.
 - b) Woody materials, not used for woods chips, required for reclamation shall be removed in whole with limbs intact and shall be stockpiled along the margins of the authorized use area separate from the topsoil piles. Once the disturbance has been recontoured and reseeded, stockpiled woody material shall be scattered across the reclaimed area where the material originated. Redistribution of woody debris will not exceed 20-30% ground cover. Limbed material shall be scattered across reclaimed areas in a manner that avoids the development of a mulch layer that suppresses growth or reproduction of desirable vegetation. Woody material will be distributed in such a way to avoid large concentrations of heavy fuels and to effectively deter vehicle use.
 - c) Woody materials that are to be stockpiled along margins and not used in the topsoil should not exceed pile dimensions of 8 x 8 x 8 feet. Materials used in the stockpiles should be a variety of diameters, but should be no smaller than 6 inches in diameter. Additionally the piles should be no less than 30 feet apart.
- 48) Trees that must be removed for construction and are not required for reclamation shall be cut down to a stump height of 6 inches or less prior to other heavy equipment operation. These trees shall be cut in four foot lengths (down to 4 inches diameter) and placed in manageable stacks immediately adjacent to a public road to facilitate removal for company use or removal by the public.

49) During pad, road, and pipeline layout, consideration will be given to maintaining old-growth stands in their entirety. Old-growth stands will be those with trees containing individuals of age greater than 300 years and having old-growth stature and development.

COMPLIANCE WITH LAWS & CONFORMANCE WITH THE LAND USE PLAN

This decision is in compliance with the 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-2012-0140-EA and it was found to have no significant impacts, thus an EIS is not required.

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.

ADMINISTRATIVE REMEDIES

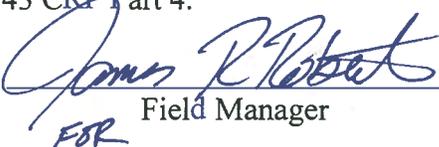
State Director Review

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 CFR Part 4.

SIGNATURE OF AUTHORIZED OFFICIAL:



FOR Field Manager

DATE SIGNED: 2/13/2013

Attachment 1.
Surface Use Plan



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

SURFACE USE PLAN OF OPERATIONS (SUPO) **BCU 442-36-199**

Proposed rig on date 5/22/13 - proposed rig off date 6/21/13 - proposed construction date 11/22/12

Date Submitted: ~~2/27~~ 9/25/12

Included with this SUPO: Application Fees/APDs / Survey Plats/Plan of Development (POD) map
cc: WPX Energy Project File

Proposed Action

WPX Energy is proposing 4 wells to a new pad to drill 4 Federal wells on Federal surface. APDs for the following bolded wells located in the table below are being submitted at this time.

Well Numbers:

BCU 442-36-199	BCU 341-36-199	BCU 33-36-199	BCU 532-36-199
----------------	----------------	---------------	----------------

Surface Use Plan of Operations

1. Existing Roads

- A. **Legible Map that shows the well site & access route** – See Plat #5 (Access Road Map).
- B. **Plan for improvement and/or maintenance of existing roads** - Access to this location exists. No new construction will be needed. All equipment and vehicles will be confined to the access road, pad and area specified in this APD.

See MSUPO under section 1 – Existing Roads for maintenance details.

2. New or Reconstructed Access Roads

- A. **Proposed Access Route shown on a Map:** See Plat 5D: Reference Area Map and Sheet 6: Location
- B. **Legible Map that identifies all permanent & temporary access roads proposed to be constructed:** See Sheet 2 (Construction Layout), Plat 5D (Reference Area Map)
- C. **All existing and proposed road structures (culverts, bridges, low-water crossings, etc.) shown on a Map and/or Well Plat:** BLM requirement of 18 inches minimum for culvert alongside road will be

met. • Drainage and ditch designs are modeled at 2ft wide by 6 in deep. See Plan of Development Map (POD Map)

D. Road (re)construction methods would include: New access off county road 122 (please see POD Map)

Road information:

- The recommended 90 degree safety & visibility with 100 ft width at intersection turnouts as recommended are followed.
- Road Width (construction row) – 24ft construction
- Road width (travel width) – 20ft running surface
- Maximum grade – 10%
- Crown design, or In-slope/Out-slop design (Diagram and/or Narrative) - State and County 2% crown design will be 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 Plat 5E BMP map and Plan of Development (POD) Map (showing culvert) in APD packages. 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) – one 18" corrugated metal culvert would be placed on road at pad entrance and one at county road entrance along with two others in between, spaced on road grade and gold book specifications. (Shown on POD map).
- Fence cuts, cattle-guards and/or turnouts – None required
- Major cuts and fills (>5ft) – Standard
- Storage of topsoil – see sixth bullet as well as MSUPO under section 2 –road interim reclamation.
- Type of surfacing materials that will be used (if required) – If needed, will be gravel road base.

Road final reclamation - - See MSUPO under section 2 – road interim reclamation and road final reclamation for details.

3. Location of Existing Wells

BCU 442-36-199 One Mile Radius for Identification of all known wells (regardless of well status) within a one-mile radius of BCU 442-36-199. (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 Sheet 2: Production Equipment Detail Map

B. Map must identify and differentiate b/t which lines are existing and those that are proposed: See Plan of Development Map which differentiates between existing and proposed lines. A new 8" gas line and a new 4" water line will be buried from the existing infrastructure located on the north side of CR 122 (at the intersection of the CR and the access road to the existing BCU 12-31-198 pad) to the pad following the CR and the proposed access road as shown on the POD map. The 8" gas line will be authorized to Bargath, a 3rd party gathering company. The approximate length of the route will be 2,165'. The total ROW width requested is 75' with 40' being permanent. The portion of the route which extends from the existing access road to the BCU 12-31-198 pad to the access road to the BCU 442-26-198 along the county road has an existing ROW grant – COC 71418. A ROW is requested for these lines in this SUPO.

5. Location and Types of Water Supply

Drilling

Please see MSUPO for fresh water source and typical volumes of water needed under section 5 – Location and Types of Water Supply-Drilling.

Access route is as follows: From the intersection of State Highway 64 and Rio Blanco County Road 5 proceed southerly along County Road 5 ±4.6 miles to the intersection with a dirt/gravel road being County Road 20, proceed right in a westerly direction along County Road 20 ±4.9 miles to an intersection with a dirt gravel road being County Road 122, proceed right in an westerly to southwesterly direction ±7.3 miles to an intersection with a dirt/gravel road, proceed right in a northerly direction ±0.3 miles to the BCU 442-36-199 drill pad location. (See Sheet 5 Access Map.)

Water transportation method will be to truck fresh water.

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

Completions

Please see MSUPO for completions water source and typical volumes needed under section 5 – Location and Types of Water supply – Completions.

The method of completions will be used is Frac on Pad. Water for fracing will be trucked to location. All water produced during this time would be recycled for use in subsequent fracture stimulations and the condensate produced would be stored in tanks for sales.

6. Source of Construction Materials

See MSUPO under number six – Source of Construction Materials for details.

7. Methods for Handling Waste Disposal

See MSUPO under section 7 – Methods for Handling Waste Disposal for details regarding different wastes including, but not limited to, the following:

- Disposal of produced water
- Disposal of drilling fluids
- Disposal of produced oil
- Reserve Pit – not needed
- Drill cuttings – see immediately below

Drill cuttings

See MSUPO attachment – Drill Cuttings Management and Disposal Plan for the Ryan Gulch Federal Unit document (dated January 11, 2012). Option number 3 will be used – onsite cuttings management.

If conditions are such that cuttings would need to be moved to another federal locations, a sundry would submitted to BLM prior to proceeding.

8. Ancillary Facilities

See Plat 5F Ancillary Map. See MSUPO under section eight – Ancillary Facilities for additional details.

9. *Wellsite Layout*

The below plats will be submitted in the site specific APD packages.

Sheet #1 of the attached APD(s) for the Well Location, (surveyed, designed, and certified by license surveyor/engineer)

Sheet #2 of the attached APD(s) for the Construction Layout.(surveyed, designed, and certified by license surveyor/engineer)

Sheet #3 of the attached APD(s) for the Construction Layout Cross Sections, (surveyed, designed, and certified by license surveyor/engineer)

Sheet #4 of the attached APD(s) for the Drill Rig Layout.

Sheet #5 of the attached APD(s) for Access Road Map (with existing and proposed access)

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 #5E of the attached APD(s) for Storm water BMP Map

Plat #5F of the attached APD(s) for Ancillary Facilities Map

Sheet #6 of the attached APD(s) for the Location (Current Footages).

Sheet #7 of the attached APD(s) for the Reclaimed Pad & Production Equipment. – contains disturbance area acreage.

Production Equipment Detail, (surveyed, designed, and certified by license surveyor/engineer)

Plan of Development (POD) Map

Location of Existing Wells - COGCC Map

WPX Energy GIS department will send Richard Brooks/Meeker BLM shapefiles in conjunction with submission of APD package(s) to meet the geospatial requirements.

The certified plats have been submitted at a 1"=80' 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.

Pad (including dimension) - Pad: 340'x450', without stormwater features. Production pad 30'x150'.

Pad cuts & fills - Biggest cut is 7.6' and biggest fill 9.1'.

Reserve pit location - NA

Access road entry points and approximate location with respect to topographic features - Access road comes in over cut from south end of pad. See Sheet 5 for location map and directions-attached.

Proposed drill rig w/anchor locations - See Sheet 4: Drilling Rig Layout.

Dikes & Ditches constructed (Stormwater Mgmt BMPs). Diagram must show maximum extent of disturbance - See Plat 5E for Stormwater BMPs. Also, Plan of Development Map shows additional culverts along the road.

Topsoil and spoils material stockpile locations; Include method of topsoil stabilization - There would be one topsoil pile on the southwest edge of pad and one excess stockpile area on the northwest edge of pad. (See Plat 2)

Cross-section diagrams of drill pad – See Plat 3.

10. *Plans for Surface Reclamation*

Drilling the four wells would take 29 days. The pad would stay in interim reclamation status for 3-6 months. The pad would stay in interim reclamation status for 3-6 months. The site is anticipated to be active for up to 35 years, meaning final reclamation could occur in the year 2048.

See MSUPO for details on the following items:

Plan for surface Interim-reclamation

- **Plan addresses Interim Reclamation(during production) –**
- **Diagram of Interim Reclamation Plans – see Plat #7 of the attached APDs**
- **Configuration of Reshaped Topography**
- **Drainage Systems (Stormwater Mgt BMPs)**
- **Proposals for Pit/Sump Closures**
- **Redistribution of Topsoil**
- **Seeding/Re-vegetation**
- **Weed Control**
- **Practices necessary to reclaim all disturbed surfaces, including access roads & pipelines**

Plan addresses Final Reclamation (Abandonment)

- **Configuration of Reshaped Topography**
- **Drainage Systems (Stormwater Mgt BMPs)**
- **Redistribution of Topsoil**
- **Seeding/Re-vegetation**
- **Weed Control**
- **Practices necessary to reclaim all disturbed surfaces, including access roads & pipelines**

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

See MSUPO for detail on the following items:

Construction details
Notifications
Wildlife Plan
Air Quality
Chemical
Ground water
Minerals-State and County
Noise
Spills
Water-General/NPDES/Water
Water-404 Locations
Water-SPCC

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

The operator has certified that the statements made in the APD package are true and correct, the work associated the proposed operations will be performed in conformity with the APD package, 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 442-36-199 Leases COC 060846

Disturbance Categories	Acres
Pads - Existing	0
Pads - New (temporary disturbance)	6
Roads - Existing	2.4
Roads - New	0.84
Other	0
Total Existing/MDP Disturbed Acres	9.24
Total Lease Acres	916
Total Disturbed Acres on Lease as % of Total Lease Acreage	1.01%

13. Lessee's or Operator's Representative and Certification

A) Representative

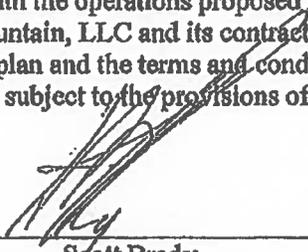
NAME: Scott Brady
ADDRESS: WPX Energy Rocky Mountain, LLC
1058 County Road #215
P. O. Box 370
Parachute, Colorado 81635
PHONE: 970-683-2284
CELLULAR: 970-250-3680

All lease and/or unit operations will be conducted in such a manner that full compliance is made with all applicable laws, regulations and Onshore Oil and Gas Orders. The operator is fully responsible for the actions of its subcontractors. A copy of these conditions will be furnished to the field representative to ensure compliance.

B) Representative Certification:

I hereby certify that I, or persons under my direct supervision, inspected the proposed drill sites and access routes that fall within the constraints of this document; that I am familiar with the conditions which presently exist; that the statements made in this plan are, to the best of my knowledge and belief, true and correct; and that the work associated with the operations proposed herein will be performed by WPX Energy Rocky Mountain, LLC and its contractors and subcontractors in conformity with this plan and the terms and conditions under which it is approved. This statement is subject to the provisions of 18 U.S.C. 1001 for the filing of a false statement.

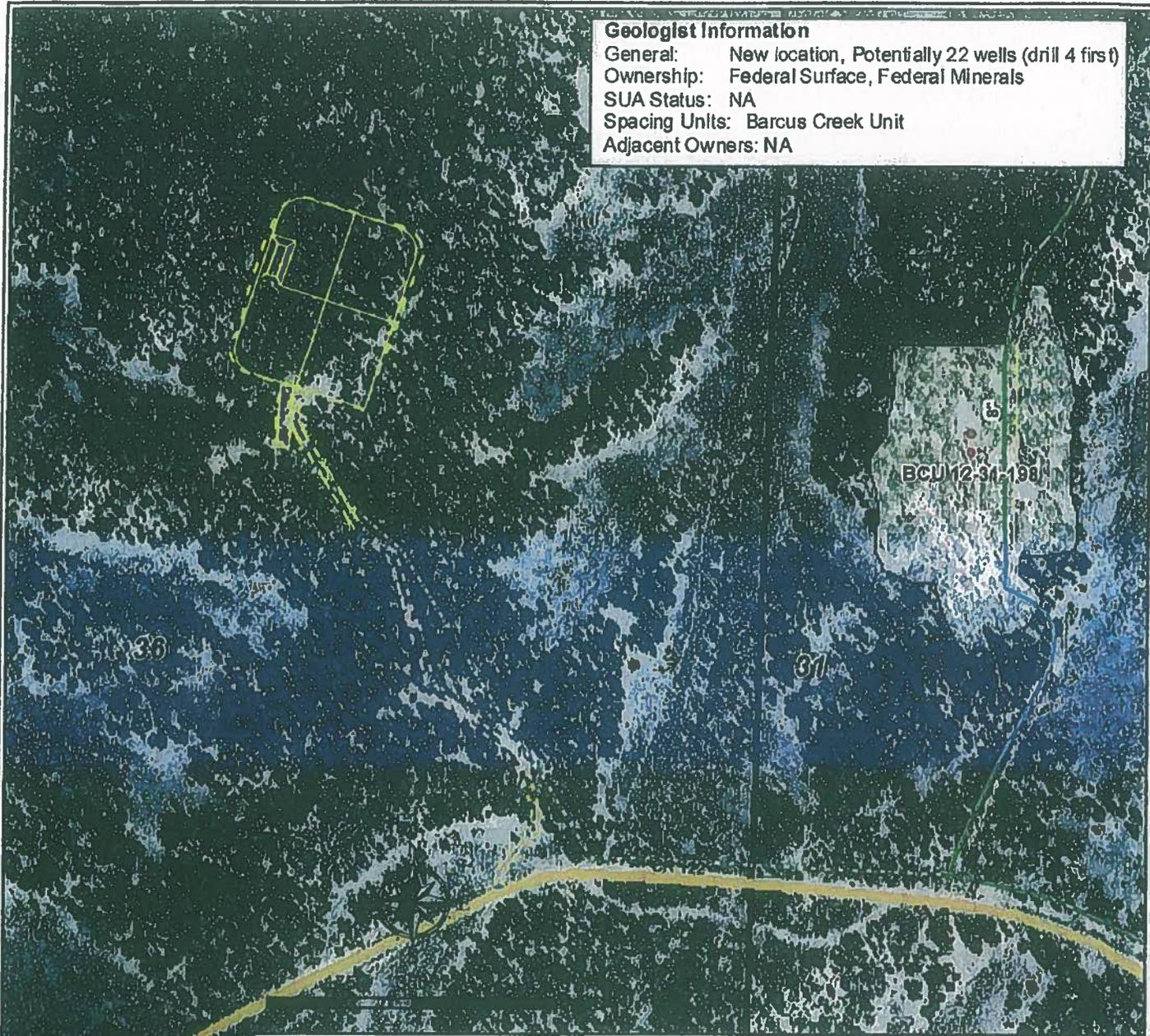
DATE 9/19/12



Scott Brady
Drilling Superintendent
WPX Energy Rocky Mountain, LLC

Geologist Information

General: New location, Potentially 22 wells (drill 4 first)
Ownership: Federal Surface, Federal Minerals
SUA Status: NA
Spacing Units: Barcus Creek Unit
Adjacent Owners: NA



Plan of Development

Access: Use new access as shown on map
Drilling: Efficiency rig
Cuttings: On location in cuttings management area.
SIMOPS: Not for first 4 wells, but yes for full development.
Completion: Frac on pad. Water will be hauled to location.
Flowback: On pad
Prod Equip: Production equipment along west side of road with tie in on the south end of area.
Tank battery in southeast corner of pad.
Pipeline: A gas and 4" water line will be installed from the existing lines at the BCU 12-31-198

Legend

- WPX Producing Well
- Proposed Road
- Proposed Cuttings Management Area
- Proposed Production Equipment Area
- Proposed Daylight Line
- Proposed Pad or Pit
- Proposed Culvert (18" CMP)
- Proposed Gas/Water Line Route
- Existing PipeLine
- Existing Pad
- County Road
- Other Existing Road

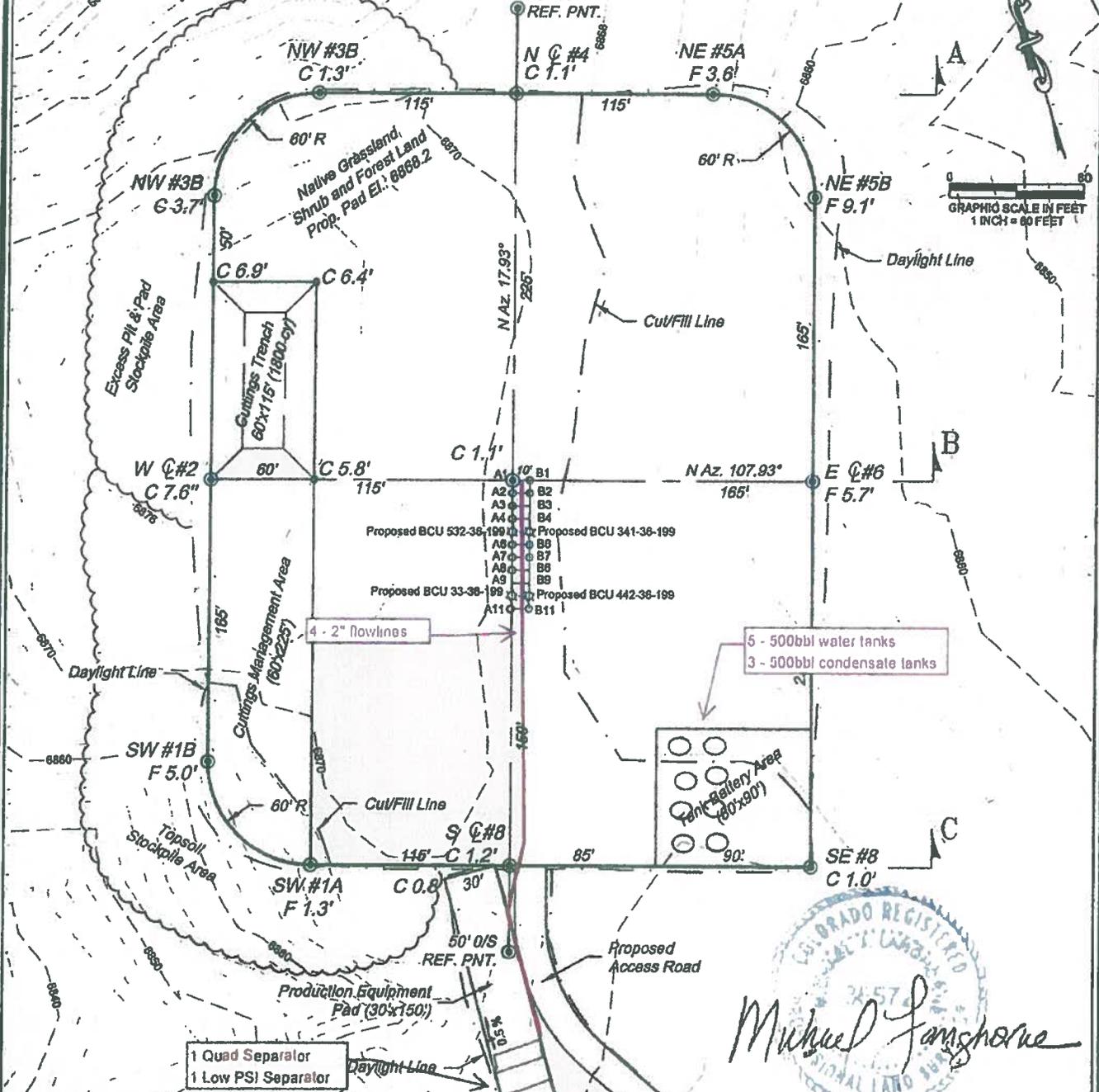
WPX Energy Rocky Mountain, LLC

BCU 442-36-199 Plan of Development

Date Prepared: May 7, 2012



Section 36
T. 1 N., R 99 W
6th. P.M.



ESTIMATED EARTHWORK QUANTITIES (cy)

ITEM	CUT	FILL	TOPSOIL	EXCESS
PAD	12856	8109	6000	547
PIT	1800			1800
TOTALS	14456	8109	6000	2347

- *NOTE:
- 1.) USE EXCESS PIT MATERIAL TO COMPLETE PAD SURFACE, IF NECESSARY.
 - 2.) 10% SWELL FACTOR APPLIED TO CUT VOLUME.
 - 3.) TOPSOIL VOLUME BASED ON 12" SOIL DEPTH.
 - 4.) TOTAL DISTURBED AREA = 6.36 ac.

REVISED: 6/29/12

Michael Langstone



135 East Third Street
Rt. 6, Colorado 81650
Ph. (970) 625-2720
Fax (970) 625-2773

BOOKCLIFF
Survey Services, Inc.

SCALE: 1" = 80'
DATE: 4/9/12
PLAT: 2 of 7
PROJECT: Highlands
DFT: cws

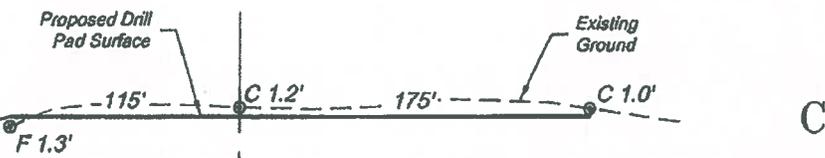
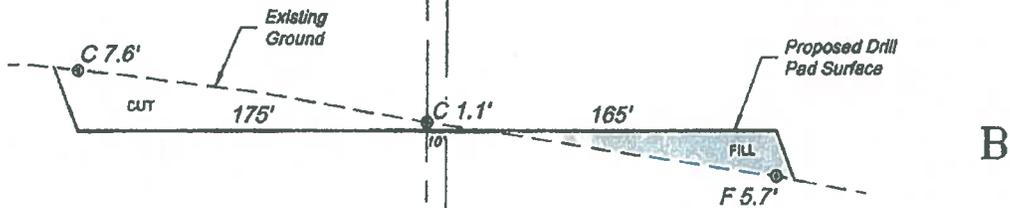
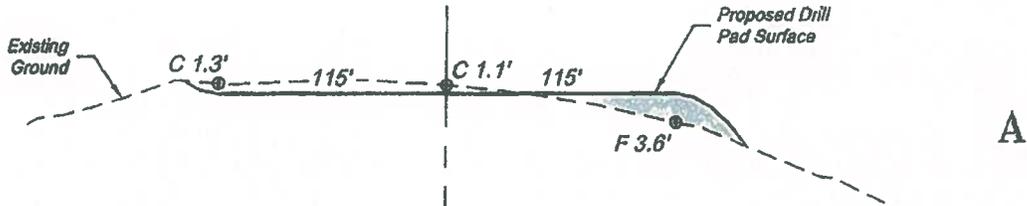
Construction Plan Prepared for:
WPXENERGY WPX Energy Rocky Mountain, LLC

BCU 442-36-199 - Sheet 2
Production Detail Map

2012 BOOKCLIFF SURVEY SERVICES, INC. ALL RIGHTS RESERVED. 04-01-2012 04:08:00 PM. 04/29/12 10:54:41 AM

Section 36
T. 1 N., R 99 W
6th. P.M.

WELLS



SCALE: Horiz.: 1" = 80'
Vert.: 1" = 20'

***NOTE:**
CUT SLOPE: 1.5:1
FILL SLOPE: 1.5:1.
OTHERWISE NOTED.

Michael J. Fancher
PROFESSIONAL LAND SURVEYOR

136 East Third Street
Rifle, Colorado 81630
Ph. (970) 625-2720
Fax (970) 625-2773

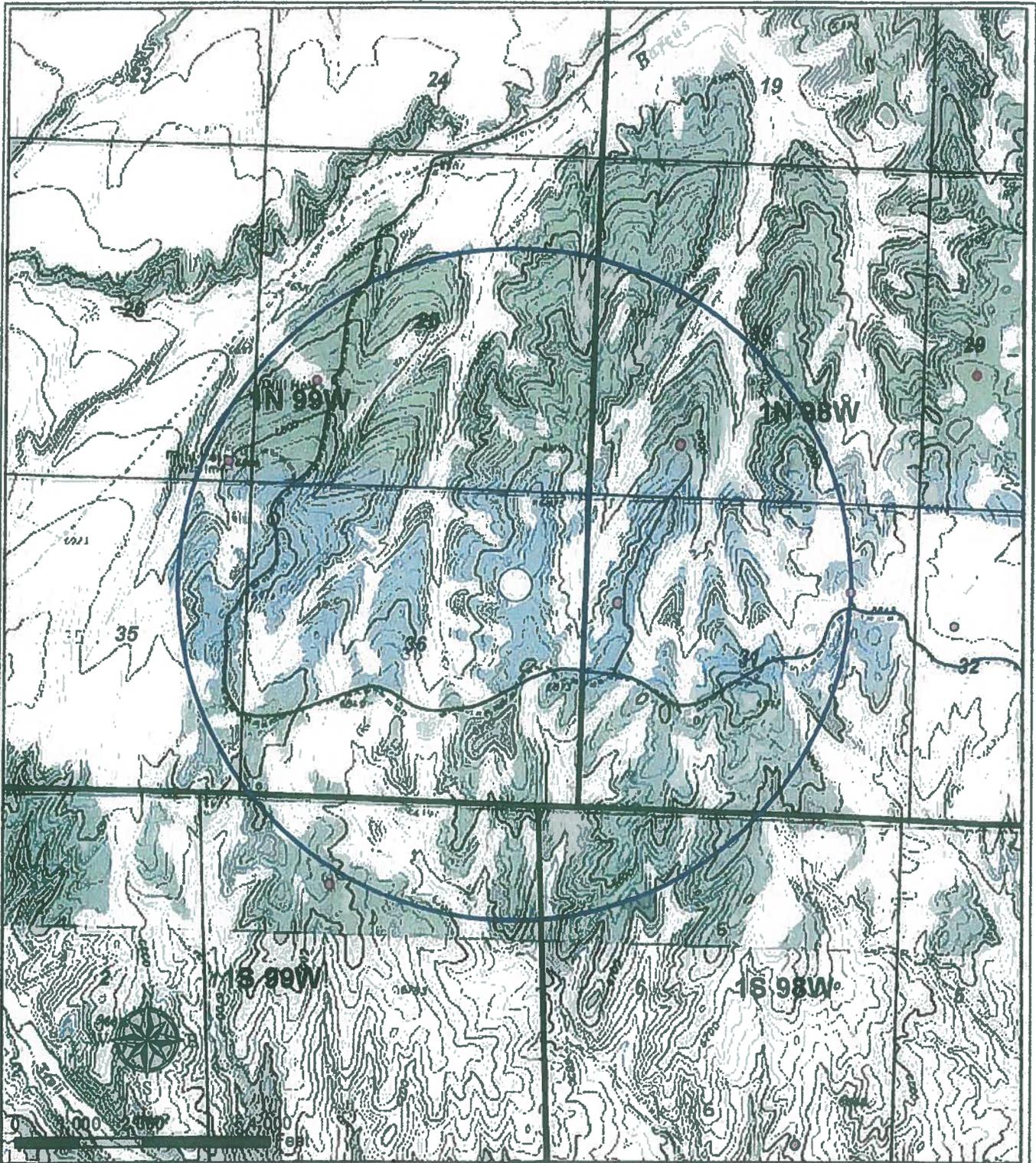
BOOKCLIFF
Survey Services, Inc.

SCALE: 1" = 80'
DATE: 4/9/12
PLAT: 3 of 7
PROJECT: Highlands
DPT: CWS

Construction Plan Prepared for:
WPXENERGY WPX Energy Rocky Mountain, LLC

BCU 442-36-199 Drill Pad - Sheet 3
CONSTRUCTION LAYOUT
CROSS SECTIONS

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Legend

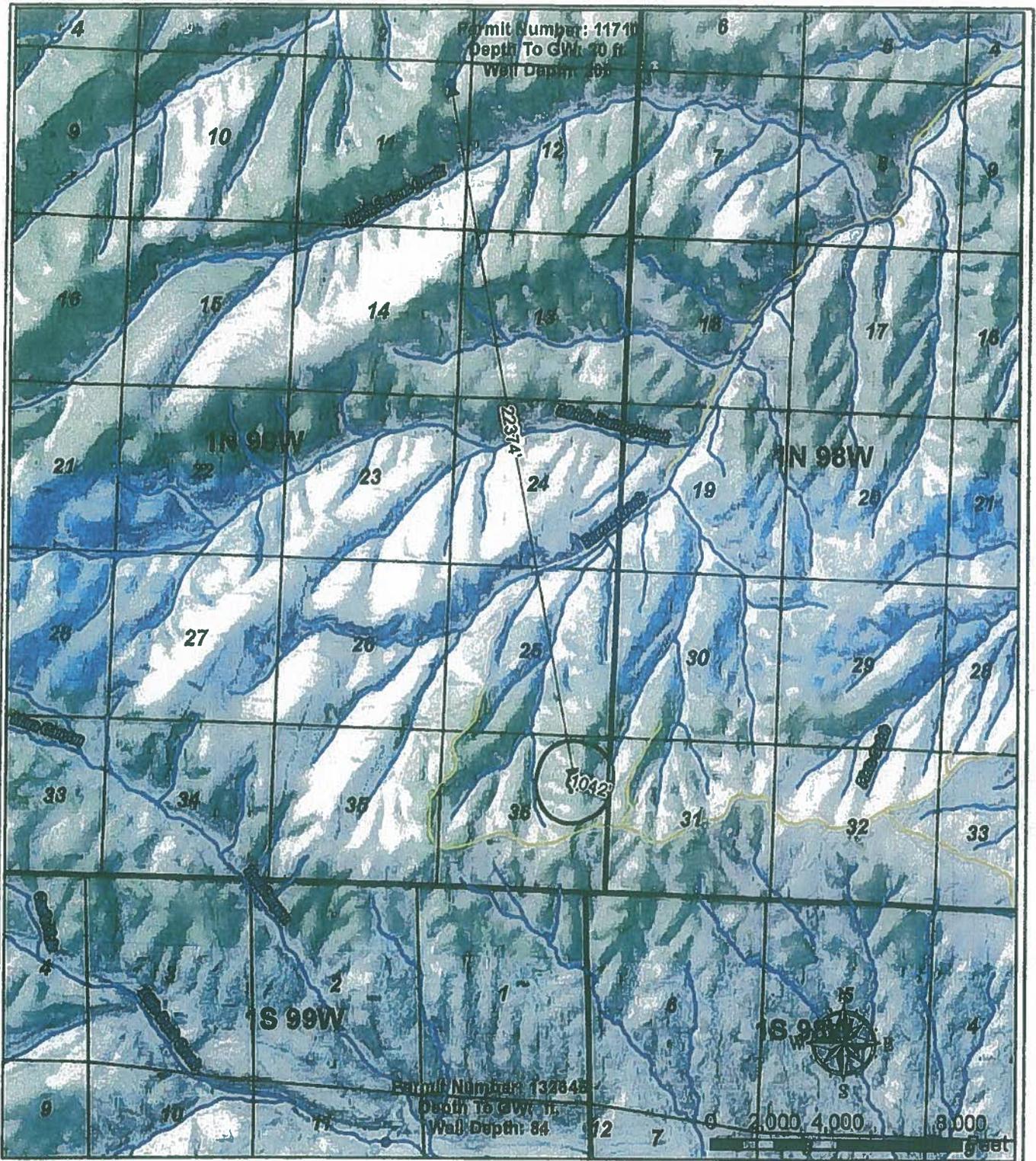
- Known Well Locations
- Proposed Drilling Location
- Existing Road
- 1 mi. Radius

WPX Energy Rocky Mountain, LLC

Plat 5B
 BCU 442-36-199
 Existing Well Locations within One-Mile-Radius

May 3, 2012





Legend

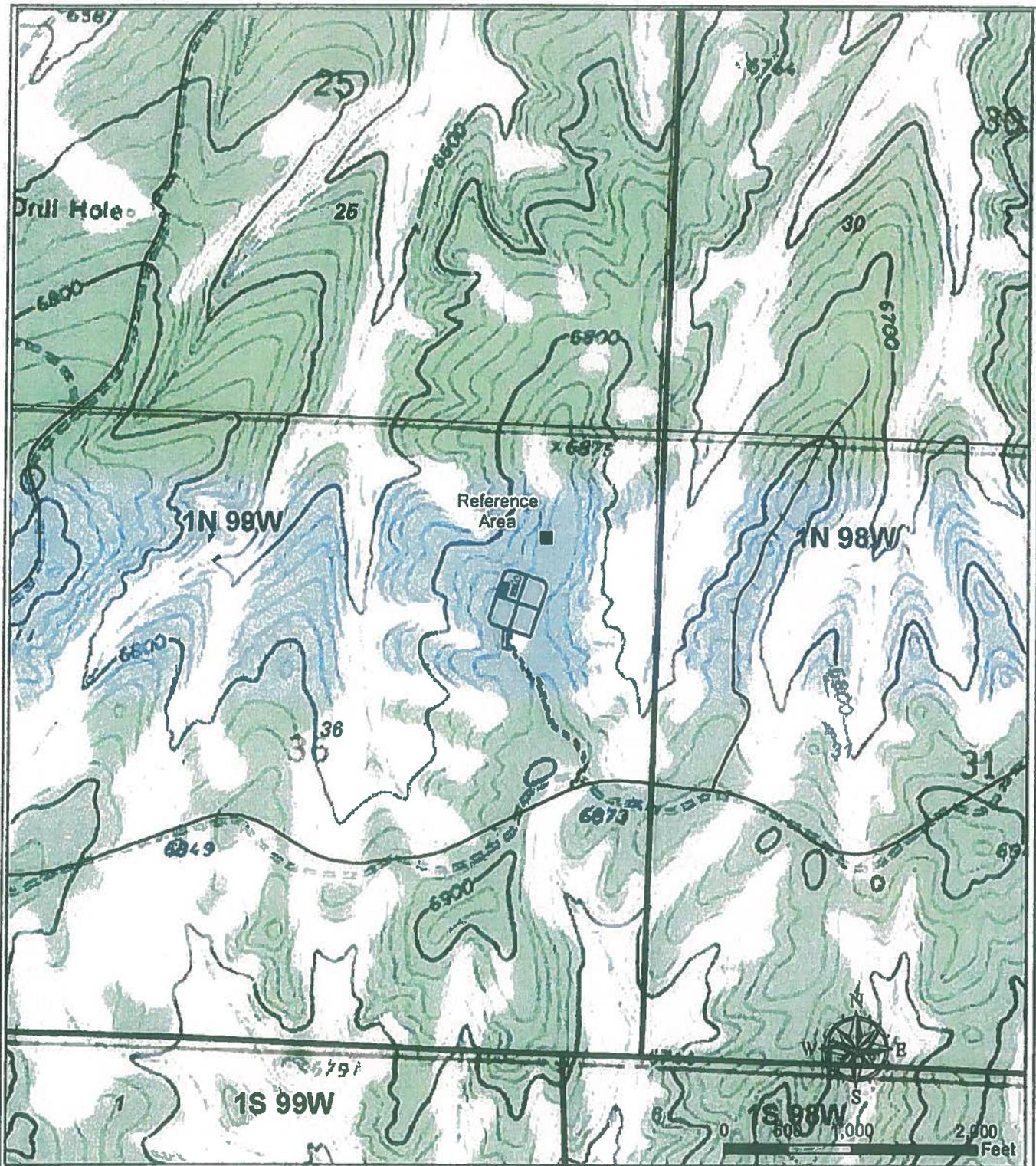
- Water Well
- Pad
- Stream
- 1000' Buffer
- Existing Road

WPX Energy Rocky Mountain, LLC

Plat 5C

BCU 442-36-199
Hydrology Map
T1N R99W, Section 36



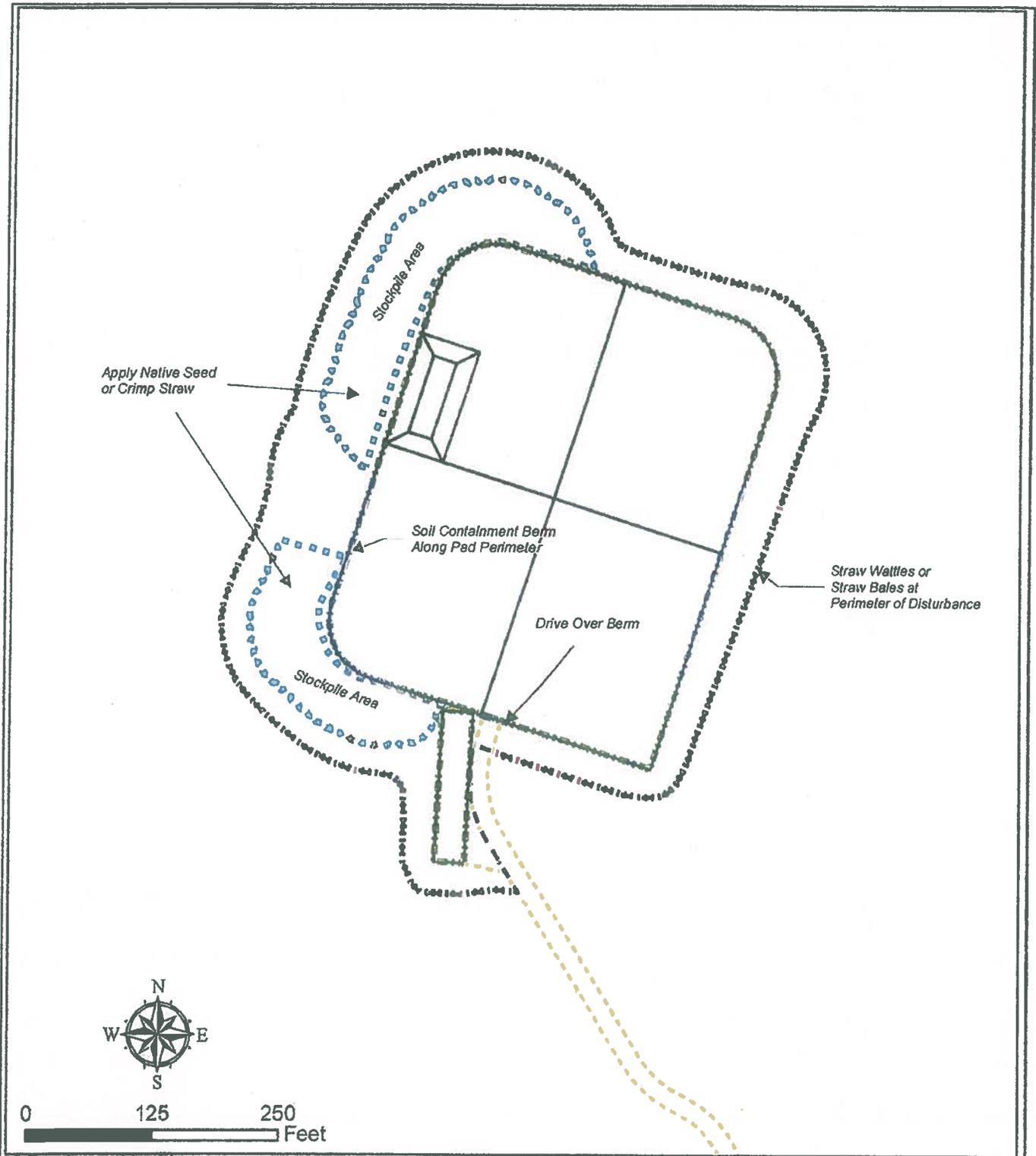


Legend

- Proposed Pad or PIT
- - - - Proposed Road

WPX Energy Rocky Mountain, LLC
 Plat 5D
 BCU 442-36-199 Reference Area Map
 T1N R99W, Section 36





Legend

- Proposed Limit of Disturbance
- Proposed Pad or Pit
- Proposed Road
- Drive Over Berm
- Native Seed and Crimp Straw
- Soil Containment Berm
- Straw Wattles or Straw Bales

WPX Energy Rocky Mountain, LLC

Plat 5E

BCU 442-36-199
 Storm Water BMP Map
 T1N R99W, Section 36





Legend

-  Injection Well
-  Multi-Well Pit
-  Fresh Water Source
-  Proposed Drilling Location
-  Wray Gulch Landfill
-  Drilling Fluid Recycling Pad
-  Centralized E&P Facility
-  Existing Road

WPX Energy Rocky Mountain, LLC

Plat 5F
 BCU 442-36-199
 Ancillary Facilities Map

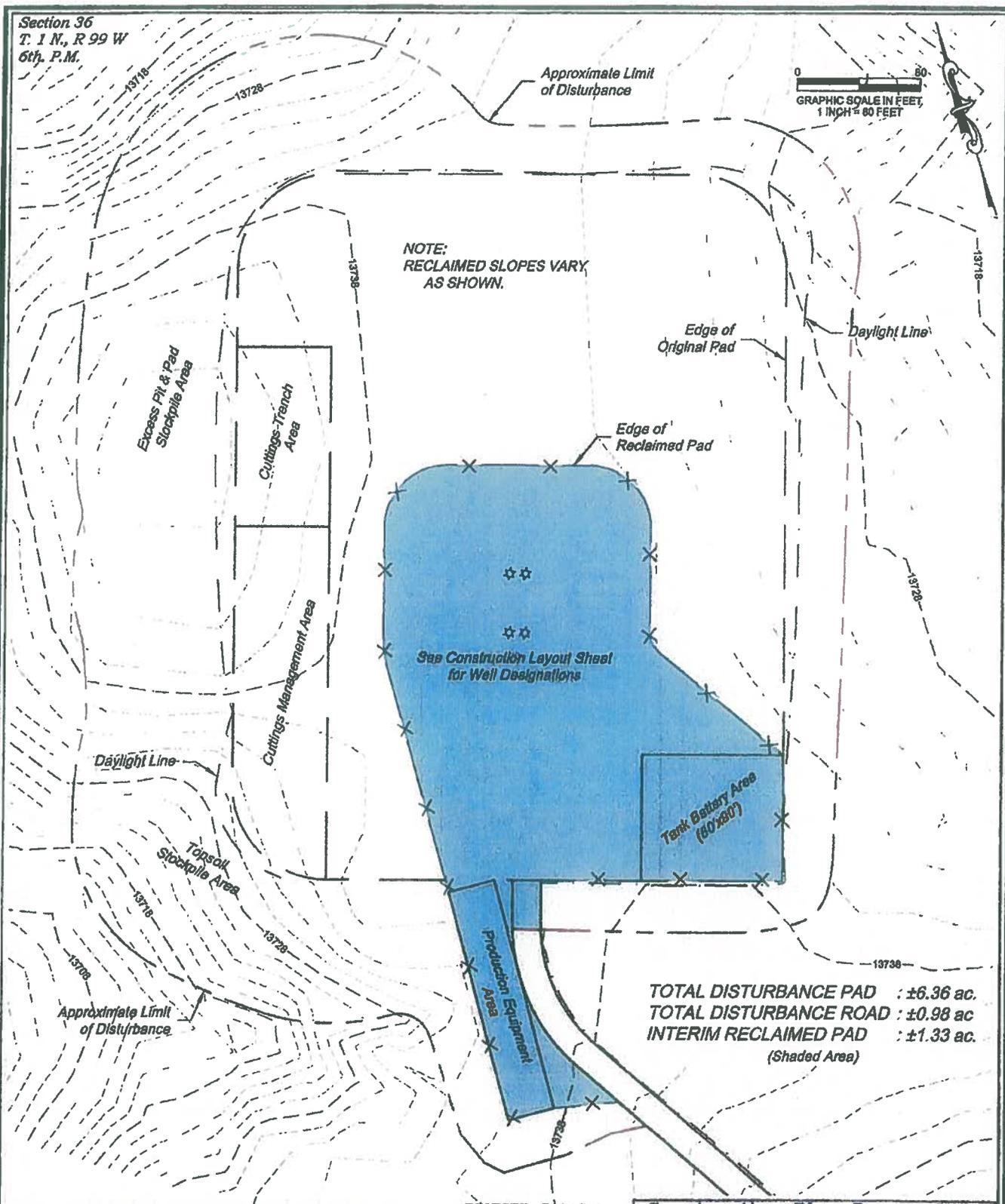
May 3, 2012



Section 36
T. 1 N., R 99 W
6th. P.M.

0 80
GRAPHIC SCALE IN FEET
1 INCH = 80 FEET

NOTE:
RECLAIMED SLOPES VARY
AS SHOWN.



Daylight Line

Edge of Original Pad

Daylight Line

Edge of Reclaimed Pad

See Construction Layout Sheet
for Well Designations

Tank Battery Area
(60x80)

Approximate Limit
of Disturbance

TOTAL DISTURBANCE PAD : ±6.36 ac.
TOTAL DISTURBANCE ROAD : ±0.98 ac.
INTERIM RECLAIMED PAD : ±1.33 ac.
(Shaded Area)

REVISED: 7/24/12

136 East Third Street
Rt. 6, Colorado 81650
Ph. (970) 625-2720
Fax (970) 625-2773



BOOKCLIFF
Survey Services, Inc.

SCALE: 1" = 80'
DATE: 4/9/12
PLAT: 7 of 7
PROJECT: Hightlands
DFT: cws

Construction Plan Prepared for:
WPXENERGY WPX Energy Rocky Mountain, LLC

BCU 442-36-199 Drill Pad - Sheet 7
INTERIM RECLAMATION

Form 3160-5
(August 2007)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

FORM APPROVED
OMB NO. 1004-0135
Expires: July 31, 2010

SUNDRY NOTICES AND REPORTS ON WELLS
Do not use this form for proposals to drill or to re-enter an abandoned well. Use form 3160-3 (APD) for such proposals.

5. Lease Serial No.
COC60846

6. If Indian, Allottee or Tribe Name

SUBMIT IN TRIPLICATE - Other instructions on reverse side.

7. If Unit or CA/Agreement, Name and/or No.
BARCUS CREEK UNIT

1. Type of Well
 Oil Well Gas Well Other

8. Well Name and No.
FEDERAL BCU 442-36-199 PAD

2. Name of Operator
WPX ENEGY ROCKY MOUNTAIN LLC
Contact: HOWARD HARRIS
E-Mail: howard.harris@wpxenergy.com

9. API Well No.

3a. Address
1001 17TH ST., SUITE 1200
DENVER, CO 80202

3b. Phone No. (include area code)
Ph: 303-606-4086
Fx: 303-606-8288

10. Field and Pool, or Exploratory
SULPHUR CREEK

4. Location of Well (Footage, Sec., T., R., M., or Survey Description)
Sec 36 T1N R99W Mer 6PM SENE

11. County or Parish, and State
RIO BLANCO COUNTY, CO

12. CHECK APPROPRIATE BOX(ES) TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION			
<input checked="" type="checkbox"/> Notice of Intent	<input type="checkbox"/> Acidize	<input type="checkbox"/> Deepen	<input type="checkbox"/> Production (Start/Resume)	<input type="checkbox"/> Water Shut-Off
<input type="checkbox"/> Subsequent Report	<input type="checkbox"/> Alter Casing	<input type="checkbox"/> Fracture Treat	<input type="checkbox"/> Reclamation	<input type="checkbox"/> Well Integrity
<input type="checkbox"/> Final Abandonment Notice	<input type="checkbox"/> Casing Repair	<input type="checkbox"/> New Construction	<input type="checkbox"/> Recomplete	<input checked="" type="checkbox"/> Other
	<input type="checkbox"/> Change Plans	<input type="checkbox"/> Plug and Abandon	<input type="checkbox"/> Temporarily Abandon	
	<input type="checkbox"/> Convert to Injection	<input type="checkbox"/> Plug Back	<input type="checkbox"/> Water Disposal	

13. Describe Proposed or Completed Operation (clearly state all pertinent details, including estimated starting date of any proposed work and approximate duration thereof. If the proposal is to deepen directionally or recompleate horizontally, give subsurface locations and measured and true vertical depths of all pertinent markers and zones. Attach the Bond under which the work will be performed or provide the Bond No. on file with BLM/BIA. Required subsequent reports shall be filed within 30 days following completion of the involved operations. If the operation results in a multiple completion or recompleation in a new interval, a Form 3160-4 shall be filed once testing has been completed. Final Abandonment Notices shall be filed only after all requirements, including reclamation, have been completed, and the operator has determined that the site is ready for final inspection.)

WPX is submitting the following information to address the deficiencies found with the BCU 442-36-198 APD package:

? The total surface disturbance required to construct the well pad and access road (including stormwater features) is approximately 7.2 acres.

? The character and intent of material:

o Surface and subsoil materials within the proposed construction areas will be used. Additional gravel for surfacing the pad will be obtained from the Connell Resources gravel pit located in the S ? of Section 6 T8N-R90W.

? Permits for disposal wells listed in MSUPO are attached.

? Permit for Mautz Ranch Multi-well pit is attached.

2012 OCT 22 PM 2:4
DO NOT WRITE IN THESE SPACES
COPY TO APPA
see app in AFMS or well file

14. I hereby certify that the foregoing is true and correct.

Electronic Submission #154762 verified by the BLM Well Information System
For WPX ENEGY ROCKY MOUNTAIN LLC, sent to the Meeker

Name (Printed/Typed) HOWARD HARRIS

Title SR. REGULATORY SPECIALIST

Signature (Electronic Submission)

Date 10/15/2012

THIS SPACE FOR FEDERAL OR STATE OFFICE USE

Approved By _____

Title

Date

Conditions of approval, if any, are attached. Approval of this notice does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.

Office

REALTY

PAT

PET

GEO

NRS

Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

** OPERATOR-SUBMITTED ** OPERATOR-SUBMITTED ** OPERATOR-SUBMITTED ** OPERATOR-SUBMITTED **

AFMSS IN OUT

Additional data for EC transaction #154762 that would not fit on the form

32. Additional remarks, continued

? Parachute Centralized E&P Waste Facility (T6S-R96W-Sec. 36) COGCC Facility ID: 149015
? Rulison Centralized E&P Waste Facility (T6S-R94W-Sec.20) COGCC Facility ID: 149006

The wells associated with this pad are the BCU 532-36-199, BCU 341-36-199, BCU 33-36-199 and the BCU 442-36-199.

FORM
31
Rev 8/99

State of Colorado
Oil and Gas Conservation Commission

1120 Lincoln Street, Suite 801, Denver, Colorado 80203 (303)894-2100 Fax:(303)894-2109



FOR OGCC USE ONLY
RECEIVED
FEB 8 2012
COGCC

UNDERGROUND INJECTION FORMATION PERMIT APPLICATION

1. Submit original and one copy of this form.
2. If data on this form is estimated, indicate as such.
3. Attachments -- see checklist and explanation of attachments.
4. Aquifer exemption is required for all injection formations with water quality <10,000 TDS (Rule 322B). Immediately contact the Commission for further requirements if the total dissolved solids (TDS) as determined by water analysts for the injection zone is less than 10,000 ppm.
5. Attach a copy of the certified receipt to each notice to surface and mineral owner(s) or submit a sample copy of the notice and an affidavit of mailing or delivery with names and addresses of those notified. Each person notified shall be specified as either a surface or mineral owner as defined by C.R.S. 34-60-103(7).

Complete the Attachment Checklist
Oper OGCC

Form 31 Original & 1 Copy	<input checked="" type="checkbox"/>
Analyse to Injection Zone Water	<input checked="" type="checkbox"/>
Analyse of Injection Water	<input checked="" type="checkbox"/>
Proposed Injection Program	<input checked="" type="checkbox"/>
Resistivity or Induction Log	<input checked="" type="checkbox"/>
Cement Bond Log	<input checked="" type="checkbox"/>
Surface or Salt Water Disposal Agent	<input checked="" type="checkbox"/>
Notice to Surface/Mineral Owners	<input checked="" type="checkbox"/>
Remedial Correction Plan for Wells	<input checked="" type="checkbox"/>
Map Oil/Water Wells w/in 1/4 Mile	<input checked="" type="checkbox"/>
List Oil/Gas Wells w/in 1/2 Mile	<input checked="" type="checkbox"/>
Map Surface Owners w/in 1/4 Mile	<input checked="" type="checkbox"/>
List Surface Owners w/in 1/4 Mile	<input checked="" type="checkbox"/>
Map Mineral Owners w/in 1/4 Mile	<input checked="" type="checkbox"/>
List Mineral Owners w/in 1/4 Mile	<input checked="" type="checkbox"/>
Surface Facility Diagram	<input checked="" type="checkbox"/>
Wellbore Diagram	<input checked="" type="checkbox"/>
If Commercial Facility, Description of Ops & Area Served	<input checked="" type="checkbox"/>
Unit Area Plat	<input checked="" type="checkbox"/>

Project Name: RMV 215-21 Injection Well Project Location: NESW Sec 21, T6S-R94W, 6th P.M.
 Project Type: Enhanced Recovery Disposal Simultaneous Disposal
 Single or Multiple Well Facility? Single Multiple
 IF UNIT OPERATIONS, ATTACH PLAT SHOWING UNIT AREA
 County: Garfield Field Name and Number: Rulleon 75400

OGCC Operator Number: 96860
 Name of Operator: Williams Production RMT Co LLC
 Address: 1088 CR 216
 City: Parachute State: CO Zip: 81635

Contact Name and Telephone:
Tyler Bittner
 No: (970) 263-2771
 Fax: (970) 624-2084

Injection Fluid Type: Produced Water Natural Gas CO₂ Drilling Fluids
 Exempt Gas Plant Waste Used Workover Fluids Other Fluids (describe):
 Commercial Facility? Yes No
 If Yes, describe area of operation and types of fluids to be injected at this facility:

PROPOSED INJECTION FORMATIONS
 FORMATION A (Name): Upper Mesaverde Porosity: 11% avg (Est)
 Formation TDS: 19,000-27,000 mg/L (Est) Frac Gradient: 0.73-0.80 (Est) psi/R Permeability: 0.001 md (Est)
 Proposed Stimulation Program: Acid Frac Treatment None
 FORMATION B (Name): N/A Porosity: _____
 Formation TDS: _____ Frac Gradient: _____ psi/R Permeability: _____
 Proposed Stimulation Program: Acid Frac Treatment None
Anticipated Project Operating Conditions
 Under normal operating conditions, estimated fluid injection rates and pressures:
 FOR WATER: A minimum of 100 bbls/day @ 500 psi to a maximum of 6000 (Est) bbls/day @ 4700 (Est) psi
 FOR GAS: A minimum of _____ mcf/day @ _____ psi to a maximum of _____ bbls/day @ _____ psi

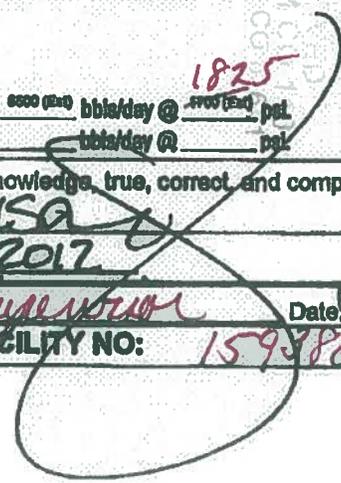
I hereby certify that the statements made in this form are, to the best of my knowledge, true, correct, and complete.

Print Name: Lisa Dee Signed: USA
 Title: Regulatory Specialist Date: 2/3/2012

OGCC Approved: Denise M. Daykin Title: UC Supervisor Date: JUL 16 2012

Order No: _____ UIC FACILITY NO: 159388
 CONDITIONS OF APPROVAL, IF ANY:

2012 OCT 22 PM 2:42





Form 33 Rev 8/09

State of Colorado Oil and Gas Conservation Commission

1120 Lincoln Street, Suite 801, Denver, Colorado 80203 (303) 894-2100 Fax: (303) 894-2109



FOR OGCC USE ONLY RECEIVED FEB 8 2012 COGCC

INJECTION WELL PERMIT APPLICATION

Submit a completed Form 33 with or after approval obtained on Form 31 (Underground Injection Permit Application) or you must have a previously approved Injection Well Permit.

- 1. Operator may not commence injection into this well until this form is approved.
2. Each individual injection well must be approved by this form.

Well Name and Number: Clough RMV 216-21 API No: 05-045-07465
UIC Facility No: 1593PP (as assigned on an approved Form 31)
Project Name: RMV 216-21 Injection Well Operator Name: Williams Production RMT Co LLO
Field Name and Number: Rufson 76400 County: Garfield
Qtr/Dir: NESW Sec: 21 Twp: 6S Range: 94W Meridian: 6th

Complete the Attachment Checklist

Attachment Checklist table with rows for Current Wellbore Diagram and Proposed Wellbore Diagram, both checked.

CURRENT WELLBORE INFORMATION

Table with columns: SIZE, DEPTH, NO. SACKS, CEMENT TOP, CBL, CIRCULATED, CALCULATED. Rows for Surface Casing, Intermediate Casing, and Production Casing.

Plug Back Total Depth: 5248' 5300 Tubing Depth: 4428' 4421 Packer Depth: 4428' 4421

Upper Mesaverde Formation Gross Perforation Interval: 4,483' to 5,208'
Formation Gross Perforation Interval: to
Formation Open Hole Interval (if any): to

List below all Plugs, Bridge Plugs, Stage Cementing or Squeeze Work performed on this wellbore: (if more space needed, continue on reverse side of this form.)

- 1. N/A
2.
3.
4.

Describe below any changes to the wellbore which will be made upon conversion. (This includes but not limited to changes of tubing and packer setting depths, any additional squeeze work for aquifer protection or casing leaks, setting of bridge plugs to isolate non-injection formations.)

- 1. Proposed - set CIBP at 5,248' and dump 2-4 sacks cement on plug to isolate producing perforations
2. Proposed - Add perforations from 4,483' to 4,716' (28 holes) and 4,972' to 5,208' (28 holes). Fracture stimulate each interval
3. Proposed - seal packer and tubing at 4,428'
4.

Comments:

Blank lines for comments.

I hereby certify that the statements made in this form are, to the best of my knowledge, true, correct, and complete.

Print Name: Lisa Dee Signed: [Signature] Title: Regulatory Specialist Date: 2/3/2012

OGCC Approved: [Signature] Title: [Signature] Supervisor Date: JUL 16 2012

MAX. SURFACE INJECTION PRESSURE: 1825 psig If Disposal Well, MAX. INJECTION VOL. LIMIT: 62.73 x 10^6 bbl

CONDITIONS OF APPROVAL, IF ANY:

FORM 26 Rev 8/09



02817596

State of Colorado Oil and Gas Conservation Commission



1120 Lincoln Street, Suite 801, Denver, Colorado 80203 (303)894-2100 Fax:(303)894-2109

RECEIVED FEB 8 2012 OGCC

SOURCE OF PRODUCED WATER FOR DISPOSAL

This form must be completed for any new disposal site and for any change in sources of produced water for an existing disposal site.

Attachment Checklist

OGCC Operator Number: 96850
Name of Operator: Williams Production INC Company LLC
Address: 1058 County Road 215
City: Parachute State: CO Zip: 81635
Contact Name and Telephone: Karolina Blaney
No: (970) 683-2295
Fax: (970) 285-9573

Table with 2 columns: Chemical Analysis of fluid, Oper OGCC. Row 1: /, /

OGCC Disposal Facility Number:
Operator's Disposal Facility Name:
Operator's Disposal Facility Number: 215-21
Location (QtrQtr, Sec, Twp, Rng, Meridian): N85W Sec 21, T6S-R94W, 6th P.M.
Address:
City: State: CO Zip: County: Garfield

If more space is required, attach additional sheet.

Multiple 'Add Source' and 'Delete Source' sections with fields for OGCC Lease No, API No, Well Name & No, Operator Name, Operator No, Location, Section, Township, Range, Producing Formation, Analysis Attached, and Transported to disposal site via.

I hereby certify that the statements made in this form are, to the best of my knowledge, true, correct, and complete.

Print Name: Karolina Blaney Signed: Karolina Blaney
Title: Environmental Specialist Date: 2/2/2012

OGCC Approved: Denise M. Omyth Title: OGCC Supervisor Date: FEB 8 2012
CONDITIONS OF APPROVAL, IF ANY:

FORM 15 Rev 6/00

State of Colorado Oil and Gas Conservation Commission

1120 Lincoln Street, Suite 301, Denver, Colorado 80202 (303)294-2100 Fax (303)294-2100



RECEIVED FOR OGCC USE ONLY MAR 23 2011 COGCC

EARTHEN PIT REPORT/PERMIT

This form is to be used for both reporting and permitting pits. Rule 903 describes when a Permit with prior approval, or a Report within 30 days, is required for pits. Submit required attachments and forms.

FORM SUBMITTED FOR:

Form 15: [] Pit Report [] Pit Permit

Complete the Attachment Checklist

Attachment Checklist table with columns for Attachment Name and Date OGCC

OGCC Operator Number: 04850 Name of Operator: Williams Production RMT Address: 1880 County Rd 216 City: Parachute State: CO Zip: 81635

Contact Name and Telephone: Karoline Blaney No: 970 693-2295 Fax: (970) 295-8873

API Number (if associated well): OGCC Facility ID (if other associated facility): Pit Location (City, Sec, Twp, Rng, Meridian): SE1/4 S19 T25 R60W 6th Latitude: 38.53483901 Longitude: -106.26143394 County: Pit Use: [] Production [] Drilling (Pit and program) [] Special Purpose (Describe Use): Mud Well Pit Type: [] Lined [] Unlined Surface Discharge Permit: [] Yes [] No Official disposal of pit contents: [] Injection [] Commercial Pit/Facility Name: Mann Ranch PI/Facility No: Attach Form 26 to identify Source Wells and Form 26 to provide Produced Water Analysis results.

Existing Site Conditions

Is the location in a "Sensitive Area"? [] Yes [] No Attach data used for determination. Distance (in feet) to nearest surface water: 241 ground water: 47 water table: 1402 LAND USE (or attach copy of Form 2A if previously submitted for associated well) Select one which best describes land use: Crop Land: [] Irrigated [] Dry Land [] Improved Pasture [] Hay Meadow [] CRP Non-Crop Land: [] Rangeland [] Timber [] Recreational [] Other (describe): Substrate: [] Industrial [] Commercial [] Residential SOILS (or attach copy of Form 2A if previously submitted for associated well) Soil map with form USNRCS survey: Sheet No: Soil Complex/Series No: 6 Soil Series Name: Brown Horizon/Thickness (in inches): A: 0-6 ; B: 6-16 ; C: 16-60 Soil Series Name: Horizon/Thickness (in inches): A: ; B: ; C: Attach detailed site plan and topo map with pit location.

Pit Design and Construction

Size of pit (foot): Length: 150 Width: 150 Depth: 15 Calculated pit volume (cub ft): 3375 Daily inflow rate (gpd/day): Daily disposal rate (attach calculations): Evaporation: NA lth/day Percolation: NA lth/day Type of liner material: Synthetic Polyethylene and geosynthetic clay liner Thickness: 60 mil & 35 mil (see attachment) Attach description of proposed design and construction (include sketches and calculations). Method of treatment of produced water prior to discharge into pit (separator, heater treater, other): Is pit fenced? [] Yes [] No Is pit netted? [] Yes [] No

I hereby certify that the statements made in this form are, to the best of my knowledge, true, correct, and complete. Print Name: Karoline Blaney Signed: Karoline Blaney Title: Environmental Specialist Date: 1/4/2011

OGCC Approved: [Signature] Title: Location Assessment Specialist Date: 4-8-11

CONDITIONS OF APPROVAL, IF ANY: FACILITY NUMBER:

See Attached



DEPARTMENT OF NATURAL RESOURCES
John W. Hickenlooper, Governor
1120 Lincoln St. Suite 801
Denver, CO 80203
Phone: (303) 894-2100
FAX: (303) 894-2109
www.colorado.gov/cogcc

August 10, 2012

045-10469

Mr. Tyler Bittner
Williams Production RMT Co LLC
1058 CR 215
Parachute, CO 81635

RE: Clough RWF 434-21 Injection Well
SWSE Section 21, T6S, R94W
Garfield County, Colorado

Dear Mr. Bittner,

The Colorado Oil and Gas Conservation Commission (COGCC) has reviewed the Williams Production RMT Co LLC application to complete the Upper Mesaverde Formation for water injection in the Clough RWF 434-21 Injection Well and has found it acceptable. This letter serves as final approval of the disposal application dated February 8, 2012.

This application has been assigned UIC Facility Number 159,388 and has a maximum injected fluid volume limitation of 43,370,000 BBL from the date of this approval. Maximum authorized surface injection pressure has been set at 1934 psig based on a fracture gradient of 0.91 psi/ft.

Only approved fluids from approved source wells can be disposed of in Class II disposal wells. Approved fluids include produced water, used drilling fluids, used workover fluids, used stimulation fluids, and used fluids from circulation during cementing operations recovered from production, injection, and exploratory wells. The Clough RWF 434-21 Injection Well is currently permitted to inject fluids from wells listed on Form 26 (Source of Produced Water for Disposal) approved on August 10, 2012. Sources of produced water and other approved Class II fluids may be added or deleted by submitting supplemental Form 26s.

A Form 4 (Sundry Notice) must be submitted which includes the date of initial injection. A water analysis of fluids injected into the Clough RWF 434-21 Injection Well is required within one year of commencement of injection. The injected water must be analyzed for total dissolved solids, major cations and major anions. The analytical data sheet must be submitted to COGCC along with a Form 4.

The nature of the injected fluids shall be monitored with sufficient frequency to yield data representative of their characteristics. Therefore, a water analysis of fluids injected into the Clough RWF 434-21 Injection Well will be required as a Condition of Approval on supplemental Form 26s when sources are added or deleted. Also, a water analysis of

**Clough RWF 434-21 Injection Well
Garfield County, Colorado
Approval for Injection**

fluids injected into the Clough RWF 434-21 Injection Well will be required at five-year intervals as a Condition of Approval on Form 21s (Mechanical Integrity Test) as required in accordance with COGCC Rule 326.a.(5). Bradenhead pressure shall be monitored regularly. Bradenhead pressure shall also be monitored on the following wells:

RMV 5-21	045-06858
RMV 93-21	045-07329
Clough 2A	045-07001
RMV 219-21	045-09535
RMV 95-21	045-07347

The volume of all produced water, used drilling fluids, used workover fluids, used stimulation fluids, and used fluids from circulation during cementing operations recovered from production, injection, and exploratory wells injected into this well must be measured and reported on COGCC Form 7 (Monthly Reported of Operations) 45 days following the month covered by the reports.

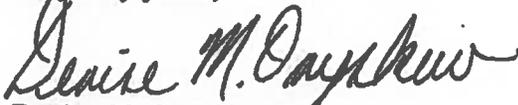
Class II fluids, other than those described above, must be approved on Form 14A (Authorization of Source of Class II Waste for Disposal) by COGCC Staff prior to injection. These fluids must be reported on Form 14 (Monthly Report of Non-Produced Water Injected).

This well is not permitted for the disposal of fluids that are not Class II waste (e.g., unused stimulation fluids, amine, motor oil, solvents, field-generated sanitary waste, storm water run-off, or other fluids from unapproved sources).

In accordance with COGCC Rule 326.a.(5), mechanical integrity tests (MITs) shall be performed at five-year intervals on the Clough RWF 434-21 Injection Well as long as it is used for the injection of fluids. The first five-year period shall commence on the date the initial MIT is performed. An MIT is also required after resetting the tubing or packer whenever the tubing or packer is disturbed during workover operations. All injection well MITs must be witnessed by COGCC Staff.

If you have any questions on this approval, please do not hesitate to call me at (303) 894-2100 ext. 5145.

Very truly yours,



Denise M. Onyskiw, P.E.
Underground Injection Control Program Supervisor

Cc: Mike Longworth, COGCC



DEPARTMENT OF NATURAL RESOURCES
John W. Hickenlooper, Governor
1120 Lincoln St. Suite 801
Denver, CO 80203
Phone: (303) 894-2100
FAX: (303) 894-2109
www.colorado.gov/oogcc

August 8, 2012

045-10389

Mr. Tyler Bittner
Williams Production RMT Co LLC
1058 CR 215
Parachute, CO 81635

RE: Clough RWF 623-21 Injection Well
NESW Section 21, T6S, R94W
Garfield County, Colorado

Dear Mr. Bittner,

The Colorado Oil and Gas Conservation Commission (COGCC) has reviewed the Williams Production RMT Co LLC application to complete the Upper Mesaverde Formation for water injection in the Clough RWF 623-21 Injection Well and has found it acceptable. This letter serves as final approval of the disposal application dated February 8, 2012.

This application has been assigned UIC Facility Number 159,387 and has a maximum injected fluid volume limitation of 27,950,000 BBL from the date of this approval. Maximum authorized surface injection pressure has been set at 1678 psig based on a fracture gradient of 0.84 psi/ft.

Only approved fluids from approved source wells can be disposed of in Class II disposal wells. Approved fluids include produced water, used drilling fluids, used workover fluids, used stimulation fluids, and used fluids from circulation during cementing operations recovered from production, injection, and exploratory wells. The Clough RWF 623-21 Injection Well is currently permitted to inject fluids from wells listed on Form 26 (Source of Produced Water for Disposal) approved on August 8, 2012. Sources of produced water and other approved Class II fluids may be added or deleted by submitting supplemental Form 26s.

A Form 4 (Sundry Notice) must be submitted which includes the date of initial injection. A water analysis of fluids injected into the Clough RWF 623-21 Injection Well is required within one year of commencement of injection. The injected water must be analyzed for total dissolved solids, major cations and major anions. The analytical data sheet must be submitted to COGCC along with a Form 4.

The nature of the injected fluids shall be monitored with sufficient frequency to yield data representative of their characteristics. Therefore, a water analysis of fluids injected into the Clough RWF 623-21 Injection Well will be required as a Condition of Approval on supplemental Form 26s when sources are added or deleted. Also, a water analysis of

Clough RWF 623-21 Injection Well
Garfield County, Colorado
Approval for Injection

fluids injected into the Clough RWF 623-21 Injection Well will be required at five-year intervals as a Condition of Approval on Form 21s (Mechanical Integrity Test) as required in accordance with COGCC Rule 326.a.(5). Bradenhead pressure shall be monitored regularly. Bradenhead pressure shall also be monitored on the following wells:

RMV 5-21	045-06858
RMV 93-21	045-07329
Clough 2A	045-07001
RMV 219-21	045-09535
RMV 95-21	045-07347

The volume of all produced water, used drilling fluids, used workover fluids, used stimulation fluids, and used fluids from circulation during cementing operations recovered from production, injection, and exploratory wells injected into this well must be measured and reported on COGCC Form 7 (Monthly Reported of Operations) 45 days following the month covered by the reports.

Class II fluids, other than those described above, must be approved on Form 14A (Authorization of Source of Class II Waste for Disposal) by COGCC Staff prior to injection. These fluids must be reported on Form 14 (Monthly Report of Non-Produced Water Injected).

This well is not permitted for the disposal of fluids that are not Class II waste (e.g., unused stimulation fluids, amine, motor oil, solvents, field-generated sanitary waste, storm water run-off, or other fluids from unapproved sources).

In accordance with COGCC Rule 326.a.(5), mechanical integrity tests (MITs) shall be performed at five-year intervals on the Clough RWF 623-21 Injection Well as long as it is used for the injection of fluids. The first five-year period shall commence on the date the initial MIT is performed. An MIT is also required after resetting the tubing or packer whenever the tubing or packer is disturbed during workover operations. All injection well MITs must be witnessed by COGCC Staff.

If you have any questions on this approval, please do not hesitate to call me at (303) 894-2100 ext. 5145.

Very truly yours,



Denise M. Onyskiw, P.E.
Underground Injection Control Program Supervisor

Cc: Mike Longworth, COGCC



DEPARTMENT OF NATURAL RESOURCES

Bill Ritter, Jr., Governor
1120 Lincoln St. Suite 801
Denver, CO 80203
Phone: (303) 894-2100
FAX: (303) 894-2109
www.colorado.gov/cogcc

May 7, 2009

Ms. Karolina Blaney
Williams Production RMT Co.
1058 County Road 215
Parachute, CO 81635

RE: Injection Permit Application Approval
Williams GM 523-36
API No. 05-045-13979
SESW Section 36, Township 6S, Range 96W, 6th P.M.
Garfield County, Colorado

Dear Ms. Blaney:

The Colorado Oil and Gas Conservation Commission (COGCC) has reviewed the Williams Production RMT Co. application to complete the Upper Mesa Verde (Williams Fork) Formation as an injection zone in the Williams GM 523-36 well and has found it acceptable. This letter serves as final approval of the disposal application submitted on February 17, 2009, with subsequent revisions.

This application has been assigned UIC Facility Number 159266. The maximum injected fluid volume limitation is 98,731,567 bbls from date of this approval. The maximum authorized surface injection pressure is 1,304 psig, based on calculation using an equivalent fracture gradient of 0.785 psi/foot for the top perforation at a depth of 3,700 feet (calculated from an actual fracture gradient of 0.726 psi/foot at 4,444 feet).

Only approved fluids from approved source wells can be disposed of in Class II disposal wells. Approved fluids include produced water, used drilling fluids, used workover fluids, used stimulation fluids, and used fluids from circulation during cementing operations recovered from production, injection, and exploratory wells. The Williams GM 523-36 well is currently permitted to inject fluids from wells listed on Form 26 (Source of Produced Water for Disposal), approved on May 7, 2009. Sources of produced water and other approved Class II fluids may be added or deleted by submitting supplemental Form 26's.

A water analysis of fluids injected into the Williams GM 523-36 well is required within one year of commencement of injection. The injected water must be

analyzed for total dissolved solids, major cations and major anions. The analytical data sheet must be submitted to COGCC along with a Form 4 (Sundry Notice) which also includes the date of initial injection.

The nature of the injected fluids shall be monitored with sufficient frequency to yield data representative of their characteristics. Therefore, a water analysis of fluids injected into the Williams GM 523-36 well will be required as a Condition of Approval on supplemental Form 26's when sources are added or deleted. Also, a water analysis of fluids injected into the Williams GM 523-36 well will be required at 5-year intervals as a Condition of Approval on Form 21's (Mechanical Integrity Test), as required in accordance with COGCC Rule 326.a.(5).

The volume of all produced water, used drilling fluids, used workover fluids, used stimulation fluids, and used fluids from circulation during cementing operations recovered from production, injection, and exploratory wells injected into this well must be measured and reported on COGCC Form 7 (Monthly Report of Operations) 45 days following the month covered by the report.

Class II fluids, other than those described above, must be approved on Form 14A (Authorization of Source of Class II Waste for Disposal) by COGCC Staff prior to injection. These fluids must be reported on Form 14 (Monthly Report of Non-Produced Water Injected).

This well is not permitted for the disposal of fluids that are not Class II waste (e.g., unused stimulation fluids, amine, motor oil, solvents, field-generated sanitary waste, storm water run-off, or other fluids from unapproved sources).

In accordance with COGCC Rule 326.a.(5), mechanical integrity tests (MIT's) shall be performed at 5-year intervals on the Williams GM 523-36 well, as long as it is used for the injection of fluids. The first 5-year period shall commence on the date the initial mechanical integrity test is performed. A MIT is also required after resetting the tubing or packer whenever the tubing or packer is disturbed during workover operations. All injection well MIT's must be witnessed by COGCC Staff.

Remediation is not required for offset wells within one quarter mile of the Williams GM 523-36 well. However, pressure monitoring of selected offset wells is required during injection into the Williams GM 523-36 well, as shown on the attached "Remedial Corrective Action Plan for Wells," which Williams Production RMT Co. submitted as an attachment to Form 31.

Williams Production RMT Co.
Injection Permit Application Approval

May 7, 2009

If you have any questions regarding this approval, please do not hesitate to call me at (970) 625-2497 Ext. 1.

Sincerely,



David D. Andrews, P.E., P.G.
Engineering Supervisor

Enclosures



DEPARTMENT OF NATURAL RESOURCES
Bill Ritter, Jr., Governor
1120 Lincoln St., Suite 801
Denver, CO 80203
Phone: (303) 894-2100
FAX: (303) 894-2109
www.cogcc.state.co.us

March 31, 2009

Ms. Karolina Blaney
Williams Production RMT Co.
1058 County Road 215
Parachute, CO 81635

RE: GM 14-36 Injection Well
SW SW Section 36, T6S, R96W
Garfield County, Colorado

Dear Ms. Blaney,

The Colorado Oil and Gas Conservation Commission (COGCC) has reviewed the application submitted by Williams Production RMT Co. to complete the Ohio Creek Formation in the GM 14-36 injection well and has found it acceptable. This letter serves as final approval of the disposal application dated January 27, 2009.

This application has been assigned **UIC Facility Number 159,262** and has a maximum injected fluid volume limitation of **13,776,000 BBL** from date of this approval. The approved maximum injected fluid volume is calculated with consideration of the injection application submitted by Williams for the GM 523-36 injection well located approximately 1600 feet from the GM 14-36 injection well. Maximum authorized surface injection pressure has been set at **1,020 psig** based on a measured fracture gradient of **.715 psi/ft**. If higher pressures are anticipated, please contact the Commission for further requirements.

Only approved fluids from approved source wells can be disposed of in Class II disposal wells. Approved fluids include produced water, used drilling fluids, used workover fluids, used stimulation fluids, and used fluids from circulation during cementing operations recovered from production, injection, and exploratory wells. The GM 14-36 well is currently permitted to inject fluids from wells listed on Form 26 (Source of Produced Water for Disposal) approved on March 31, 2009. Sources of produced water and other approved Class II fluids may be added or deleted by submitting supplemental Form 26's.

A water analysis of fluids injected into the GM 14-36 well is required within one year of commencement of injection. The injected water must be analyzed for total dissolved solids, major cations and major anions. The analytical data sheet must be submitted to COGCC along with for a Form 4 (Sundry Notice) which also includes the date of initial injection.

The nature of the injected fluids shall be monitored with sufficient frequency to yield data representative of their characteristics. Therefore, a water analysis of fluids injected into the

**GM 14-36 Injection Well
Garfield County, Colorado
Approval for Injection**

GM 14-36 injection well will be required as a Condition of Approval on supplemental form 26's when sources are added or deleted. Also, a water analysis of fluids injected into the GM 14-36 Injection well will be required at 5-year intervals as a Condition of Approval on Form 21's (Mechanical Integrity Test) as required in accordance with COGCC Rule 326.a.(5).

The volume of all produced water, used drilling fluids, used workover fluids, used stimulation fluids, and used fluids from circulation during cementing operations recovered from production, injection, and exploratory wells injected into this well must be measured and reported on COGCC Form 7 (Monthly Reported of Operations) 45 days following the month covered by the reports.

Class II fluids, other than those described above, must be approved on Form 14A (Authorization of Source of Class II Waste for Disposal) by COGCC Staff prior to injection. These fluids must be reported on Form 14 (Monthly Report of Non-Produced Water Injected).

This well is not permitted for the disposal of fluids that are not Class II waste (e.g., unused stimulation fluids, amine, motor oil, solvents, field-generated sanitary waste, storm water run-off, or other fluids from unapproved sources).

In accordance with COGCC Rule 326.a.(5), mechanical integrity tests (MIT's) shall be performed at 5-year intervals on the GM 14-36 Injection well as long as it is used for the Injection of fluids. The first 5-year period shall commence on the date the initial mechanical integrity test is performed. An MIT is also required after resetting the tubing or packer whenever the tubing or packer is disturbed during workover operations. All injection well MIT's must be witnessed by COGCC Staff.

Because a producing well exists within one quarter mile of the GM 14-36 Injection well that does not have cement coverage of the Ohio Creek, within one year of the initial date of Injection the operator will re-enter the GM 11-1 well and provide cement coverage across the Ohio Creek Formation.

If you have any questions on this approval, please do not hesitate to call me at 894-2100-Ext 5104.

Very truly yours,


David K. Dillon
Engineering Manager



DEPARTMENT OF NATURAL RESOURCES

Bill Ritter, Jr., Governor
1120 Lincoln St. Suite 801
Denver, CO 80203
Phone: (303) 894-2100
FAX: (303) 894-2109
www.colorado.gov/cogcc

October 20, 2009

Ms. Karolina Blaney
Williams Production RMT Co.
1058 County Road 215
Parachute, CO 81635

RE: Injection Permit Application Approval
Williams GM 931-1D
API No. 05-045-18424
SWNE Section 1, Township 7S, Range 96W, 6th P.M.
Garfield County, Colorado

Dear Ms. Blaney:

The Colorado Oil and Gas Conservation Commission (COGCC) has reviewed the Williams Production RMT Co. application to complete the Williams Fork Formation as an injection zone in the Williams GM 931-1D well and has found it acceptable. This letter serves as final approval of the disposal application, which was originally received by COGCC on March 26, 2009, with subsequent revisions.

This application has been assigned **UIC Facility Number 169297**. The maximum injected fluid volume limitation is **59,418,783 bbls** from date of this approval. The maximum authorized surface injection pressure is **1,261 psig**, based on calculation using an equivalent fracture gradient of 0.781 psi/foot for the top perforation at a depth of 3,627 feet (calculated from an actual fracture gradient of 0.759 psi/foot at 3,865 feet).

Only approved fluids from approved source wells can be disposed of in Class II disposal wells. Approved fluids include produced water, used drilling fluids, used workover fluids, used stimulation fluids, and used fluids from circulation during cementing operations recovered from production, injection, and exploratory wells. The Williams GM 931-1D well is currently permitted to inject fluids from wells listed on Form 26 (Source of Produced Water for Disposal), approved on October 20, 2009. Sources of produced water and other approved Class II fluids may be added or deleted by submitting supplemental Form 26's.

A water analysis of fluids injected into the Williams GM 931-1D well is required within one year of commencement of injection. The injected water must be analyzed for total dissolved solids, major cations and major anions. The analytical data sheet must be submitted to COGCC along with a Form 4 (Sundry Notice) which also includes the date of initial injection.

The nature of the injected fluids shall be monitored with sufficient frequency to yield data representative of their characteristics. Therefore, a water analysis of fluids injected into the Williams GM 931-1D well will be required as a Condition of Approval on supplemental Form 26's when sources are added or deleted. Also, a water analysis of fluids injected into the Williams GM 931-1D well will be required at 5-year intervals as a Condition of Approval on Form 21's (Mechanical Integrity Test), as required in accordance with COGCC Rule 326.a.(5).

The volume of all produced water, used drilling fluids, used workover fluids, used stimulation fluids, and used fluids from circulation during cementing operations recovered from production, injection, and exploratory wells injected into this well must be measured and reported on COGCC Form 7 (Monthly Report of Operations) 45 days following the month covered by the report.

Class II fluids, other than those described above, must be approved on Form 14A (Authorization of Source of Class II Waste for Disposal) by COGCC Staff prior to injection. These fluids must be reported on Form 14 (Monthly Report of Non-Produced Water Injected).

This well is not permitted for the disposal of fluids that are not Class II waste (e.g., unused stimulation fluids, amine, motor oil, solvents, field-generated sanitary waste, storm water run-off, or other fluids from unapproved sources).

In accordance with COGCC Rule 326.a.(5), mechanical integrity tests (MIT's) shall be performed at 5-year intervals on the Williams GM 931-1D well, as long as it is used for the injection of fluids. The first 5-year period shall commence on the date the initial mechanical integrity test is performed. A MIT is also required after resetting the tubing or packer whenever the tubing or packer is disturbed during workover operations. All injection well MIT's must be witnessed by COGCC Staff.

Remediation is not required for offset wells within one quarter mile of the Williams GM 931-1D well. However, pressure monitoring of selected offset wells is required during injection into the Williams GM 931-1D well, as shown on the

Williams Production RMT Co.
Injection Permit Application Approval

October 20, 2009

attached "Remedial Corrective Action Plan for Wells," which Williams Production RMT Co. submitted as an attachment to Form 31.

If you have any questions regarding this approval, please do not hesitate to call me at (970) 625-2497 Ext. 1.

Sincerely,



David D. Andrews, P.E., P.G.
Engineering Supervisor

Enclosures



DEPARTMENT OF NATURAL RESOURCES

Bill Ritter, Jr., Governor
1120 Lincoln St. Suite 801
Denver, CO 80203
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www.colorado.gov/cogcc

October 20, 2009

Ms. Karolina Blaney
Williams Production RMT Co.
1058 County Road 215
Parachute, CO 81635

RE: Injection Permit Application Approval
Williams GM 923-1D
API No. 05-045-18424
SWNE Section 1, Township 7S, Range 96W, 6th P.M.
Garfield County, Colorado

Dear Ms. Blaney:

The Colorado Oil and Gas Conservation Commission (COGCC) has reviewed the Williams Production RMT Co. application to complete the Williams Fork Formation as an injection zone in the Williams GM 923-1D well and has found it acceptable. This letter serves as final approval of the disposal application, which was originally received by COGCC on March 26, 2009, with subsequent revisions.

This application has been assigned **UIC Facility Number 159295**. The maximum injected fluid volume limitation is **84,130,953 bbls** from date of this approval. The maximum authorized surface injection pressure is **1,222 psig**, based on calculation using an equivalent fracture gradient of 0.758 psi/foot for the top perforation at a depth of 3,755 feet (calculated from an actual fracture gradient of 0.741 psi/foot at 3,970 feet).

Only approved fluids from approved source wells can be disposed of in Class II disposal wells. Approved fluids include produced water, used drilling fluids, used workover fluids, used stimulation fluids, and used fluids from circulation during cementing operations recovered from production, injection, and exploratory wells. The Williams GM 923-1D well is currently permitted to inject fluids from wells listed on Form 26 (Source of Produced Water for Disposal), approved on October 20, 2009. Sources of produced water and other approved Class II fluids may be added or deleted by submitting supplemental Form 26's.

A water analysis of fluids injected into the Williams GM 923-1D well is required within one year of commencement of injection. The injected water must be analyzed for total dissolved solids, major cations and major anions. The analytical data sheet must be submitted to COGCC along with a Form 4 (Sundry Notice) which also includes the date of initial injection.

The nature of the injected fluids shall be monitored with sufficient frequency to yield data representative of their characteristics. Therefore, a water analysis of fluids injected into the Williams GM 923-1D well will be required as a Condition of Approval on supplemental Form 26's when sources are added or deleted. Also, a water analysis of fluids injected into the Williams GM 923-1D well will be required at 5-year intervals as a Condition of Approval on Form 21's (Mechanical Integrity Test), as required in accordance with COGCC Rule 326.a.(5).

The volume of all produced water, used drilling fluids, used workover fluids, used stimulation fluids, and used fluids from circulation during cementing operations recovered from production, injection, and exploratory wells injected into this well must be measured and reported on COGCC Form 7 (Monthly Report of Operations) 45 days following the month covered by the report.

Class II fluids, other than those described above, must be approved on Form 14A (Authorization of Source of Class II Waste for Disposal) by COGCC Staff prior to injection. These fluids must be reported on Form 14 (Monthly Report of Non-Produced Water Injected).

This well is not permitted for the disposal of fluids that are not Class II waste (e.g., unused stimulation fluids, amine, motor oil, solvents, field-generated sanitary waste, storm water run-off, or other fluids from unapproved sources).

In accordance with COGCC Rule 326.a.(5), mechanical integrity tests (MIT's) shall be performed at 5-year intervals on the Williams GM 923-1D well, as long as it is used for the injection of fluids. The first 5-year period shall commence on the date the initial mechanical integrity test is performed. A MIT is also required after resetting the tubing or packer whenever the tubing or packer is disturbed during workover operations. All injection well MIT's must be witnessed by COGCC Staff.

Remediation is not required for offset wells within one quarter mile of the Williams GM 923-1D well. However, pressure monitoring of selected offset wells is required during injection into the Williams GM 923-1D well, as shown on the

Williams Production RMT Co.
Injection Permit Application Approval

October 20, 2009

attached "Remedial Corrective Action Plan for Wells," which Williams Production RMT Co. submitted as an attachment to Form 31.

If you have any questions regarding this approval, please do not hesitate to call me at (970) 625-2497 Ext. 1.

Sincerely,



David D. Andrews, P.E., P.G.
Engineering Supervisor

Enclosures



DEPARTMENT OF NATURAL RESOURCES
Bill Ritter, Jr., Governor
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Denver, CO 80203
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www.colorado.gov/cogcc

March 4, 2010

Mr. Gabriel J. D'Arthenay
Williams Production Ryan Gulch LLC
1515 Arapahoe St. Tower 3 Suite 1000
Denver, CO 80202

RE: Federal 299-27-5 Injection Well
SWNE Section 27, T2S, R99W
Rio Blanco County, Colorado

Dear Mr. D'Arthenay,

The Colorado Oil and Gas Conservation Commission (COGCC) has reviewed the Williams Production Ryan Gulch LLC application to complete the Mesaverde Formation for water injection in the Federal 299-27-5 Injection Well and has found it acceptable. This letter serves as final approval of the disposal application dated September 9, 2009.

This application has been assigned UIC Facility Number 159,317 and has a maximum injected fluid volume limitation of 36,360,000 BBL from the date of this approval. Maximum authorized surface injection pressure has been set at 914 psig based on a fracture gradient of 0.58 psi/ft. Bradenhead pressure monitoring during injection is required for this well.

Only approved fluids from approved source wells can be disposed of in Class II disposal wells. Approved fluids include produced water, used drilling fluids, used workover fluids, used stimulation fluids, and used fluids from circulation during cementing operations recovered from production, injection, and exploratory wells. The Federal 299-27-5 Injection Well is currently permitted to inject fluids from wells listed on Form 26 (Source of Produced Water for Disposal) approved on March 4, 2010. Sources of produced water and other approved Class II fluids may be added or deleted by submitting supplemental Form 26s.

A Form 4 (Sundry Notice) must be submitted which includes the date of initial injection. A water analysis of fluids injected into the Federal 299-27-5 Injection Well is required within one year of commencement of injection. The injected water must be analyzed for total dissolved solids, major cations and major anions. The analytical data sheet must be submitted to COGCC along with a Form 4.

Federal 299-27-5 Injection Well
Rio Blanco County, Colorado
Approval for Injection

The nature of the injected fluids shall be monitored with sufficient frequency to yield data representative of their characteristics. Therefore, a water analysis of fluids injected into the Federal 299-27-5 Injection Well will be required as a Condition of Approval on supplemental Form 26s when sources are added or deleted. Also, a water analysis of fluids injected into the Federal 299-27-5 Injection Well will be required at five-year intervals as a Condition of Approval on Form 21s (Mechanical Integrity Test) as required in accordance with COGCC Rule 326.a.(5).

The volume of all produced water, used drilling fluids, used workover fluids, used stimulation fluids, and used fluids from circulation during cementing operations recovered from production, injection, and exploratory wells injected into this well must be measured and reported on COGCC Form 7 (Monthly Reported of Operations) 45 days following the month covered by the reports.

Class II fluids, other than those described above, must be approved on Form 14A (Authorization of Source of Class II Waste for Disposal) by COGCC Staff prior to injection. These fluids must be reported on Form 14 (Monthly Report of Non-Produced Water Injected).

This well is not permitted for the disposal of fluids that are not Class II waste (e.g., unused stimulation fluids, amine, motor oil, solvents, field-generated sanitary waste, storm water run-off, or other fluids from unapproved sources).

In accordance with COGCC Rule 326.a.(5), mechanical integrity tests (MITs) shall be performed at five-year intervals on the Federal 299-27-5 Injection Well as long as it is used for the injection of fluids. The first five-year period shall commence on the date the initial mechanical integrity test is performed. An MIT is also required after resetting the tubing or packer whenever the tubing or packer is disturbed during workover operations. All injection well MITs must be witnessed by COGCC Staff.

If you have any questions on this approval, please do not hesitate to call me at (303) 894-2100 Ext 5145.

Very truly yours,



Denise M. Onyskiw, P.E.
Underground Injection Control Program Supervisor



DEPARTMENT OF NATURAL RESOURCES
John W. Hickenlooper, Governor
1120 Lincoln St. Suite 801
Denver, CO 80203
Phone: (303) 894-2100
FAX: (303) 894-2109
www.colorado.gov/cogcc

December 21, 2011

Mr. Ryan Olson
Williams Production RMT
1058 County Road 215
Parachute, CO 81635

RE: GM 239-36 Injection Well
NESW Section 36 T6S, R96W
Garfield County, Colorado

Dear Mr. Olson,

The Colorado Oil and Gas Conservation Commission (COGCC) has reviewed the Williams Production RMT application to complete the Upper Mesaverde Formation for water injection in the GM 239-36 Injection Well and has found it acceptable. This letter serves as final approval of the disposal application dated June 10, 2011.

This application has been assigned **UIC Facility Number 159,369** and has a maximum injected fluid volume limitation of **72,200,000 BBL** from the date of this approval. Maximum authorized surface injection pressure has been set at **1411 psig** based on a fracture gradient of 0.793 psi/foot.

Only approved fluids from approved source wells can be disposed of in Class II disposal wells. Approved fluids include produced water, used drilling fluids, used workover fluids, used stimulation fluids, and used fluids from circulation during cementing operations recovered from production, injection, and exploratory wells. The GM 239-36 Injection Well is currently permitted to inject fluids from wells listed on Form 26 (Source of Produced Water for Disposal) approved on December 21, 2011. Sources of produced water and other approved Class II fluids may be added or deleted by submitting supplemental Form 26s.

A Form 4 (Sundry Notice) must be submitted which includes the date of initial injection. A water analysis of fluids injected into the GM 239-36 Injection Well is required within one year of commencement of injection. The injected water must be analyzed for total dissolved solids, major cations and major anions. The analytical data sheet must be submitted to COGCC along with a Form 4.

**GM 239-36 Injection Well
Garfield County, Colorado
Approval for Injection**

The nature of the injected fluids shall be monitored with sufficient frequency to yield data representative of their characteristics. Therefore, a water analysis of fluids injected into the GM 239-36 Injection Well will be required as a Condition of Approval on supplemental Form 26s when sources are added or deleted. Also, a water analysis of fluids injected into the GM 239-36 Injection Well will be required at five-year intervals as a Condition of Approval on Form 21s (Mechanical Integrity Test) as required in accordance with COGCC Rule 326.a.(5). Bradenhead pressure shall be monitored regularly.

The volume of all produced water, used drilling fluids, used workover fluids, used stimulation fluids, and used fluids from circulation during cementing operations recovered from production, injection, and exploratory wells injected into this well must be measured and reported on COGCC Form 7 (Monthly Report of Operations) 45 days following the month covered by the reports.

Class II fluids, other than those described above, must be approved on Form 14A (Authorization of Source of Class II Waste for Disposal) by COGCC Staff prior to injection. These fluids must be reported on Form 14 (Monthly Report of Non-Produced Water Injected).

This well is not permitted for the disposal of fluids that are not Class II waste (e.g., unused stimulation fluids, amine, motor oil, solvents, field-generated sanitary waste, storm water run-off, or other fluids from unapproved sources).

In accordance with COGCC Rule 326.a.(5), mechanical integrity tests (MITs) shall be performed at five-year intervals on the GM 239-36 Injection Well as long as it is used for the injection of fluids. The first five-year period shall commence on the date the initial MIT is performed. An MIT is also required after resetting the tubing or packer whenever the tubing or packer is disturbed during workover operations. All injection well MITs must be witnessed by COGCC Staff.

If you have any questions on this approval, please do not hesitate to call me at (303) 894-2100 ext. 5145.

Very truly yours,



**Denise M. Onyskiw, P.E.
Underground Injection Control Program Supervisor**

Cc: Mike Longworth, COGCC



DEPARTMENT OF NATURAL RESOURCES

Bill Ritter, Jr., Governor
1120 Lincoln St. Suite 801
Denver, CO 80203
Phone: (303) 894-2100
FAX: (303) 894-2109
www.colorado.gov/cogcc

October 21, 2009

Ms. Karolina Blaney
Williams Production RMT Co.
1058 County Road 215
Parachute, CO 81635

RE: Injection Permit Application Approval
Williams GM 943-1D
API No. 05-045-18426
SWNE Section 1, Township 7S, Range 96W, 6th P.M.
Garfield County, Colorado

Dear Ms. Blaney:

The Colorado Oil and Gas Conservation Commission (COGCC) has reviewed the Williams Production RMT Co. application to complete the Williams Fork Formation as an injection zone in the Williams GM 943-1D well and has found it acceptable. This letter serves as final approval of the disposal application, which was originally received by COGCC on March 26, 2009, with subsequent revisions.

This application has been assigned UIC Facility Number 159296. The maximum injected fluid volume limitation is 81,145,878 bbls from date of this approval. The maximum authorized surface injection pressure is 1,566 psig, based on calculation using a fracture gradient of 0.853 psi/foot.

Only approved fluids from approved source wells can be disposed of in Class II disposal wells. Approved fluids include produced water, used drilling fluids, used workover fluids, used stimulation fluids, and used fluids from circulation during cementing operations recovered from production, injection, and exploratory wells. The Williams GM 943-1D well is currently permitted to inject fluids from wells listed on Form 26 (Source of Produced Water for Disposal), approved on October 21, 2009. Sources of produced water and other approved Class II fluids may be added or deleted by submitting supplemental Form 26's.

A water analysis of fluids injected into the Williams GM 943-1D well is required within one year of commencement of injection. The injected water must be analyzed for total dissolved solids, major cations and major anions. The

analytical data sheet must be submitted to COGCC along with a Form 4 (Sundry Notice) which also includes the date of initial injection.

The nature of the injected fluids shall be monitored with sufficient frequency to yield data representative of their characteristics. Therefore, a water analysis of fluids injected into the Williams GM 943-1D well will be required as a Condition of Approval on supplemental Form 26's when sources are added or deleted. Also, a water analysis of fluids injected into the Williams GM 943-1D well will be required at 5-year intervals as a Condition of Approval on Form 21's (Mechanical Integrity Test), as required in accordance with COGCC Rule 326.a.(5).

The volume of all produced water, used drilling fluids, used workover fluids, used stimulation fluids, and used fluids from circulation during cementing operations recovered from production, injection, and exploratory wells injected into this well must be measured and reported on COGCC Form 7 (Monthly Report of Operations) 45 days following the month covered by the report.

Class II fluids, other than those described above, must be approved on Form 14A (Authorization of Source of Class II Waste for Disposal) by COGCC Staff prior to injection. These fluids must be reported on Form 14 (Monthly Report of Non-Produced Water Injected).

This well is not permitted for the disposal of fluids that are not Class II waste (e.g., unused stimulation fluids, amine, motor oil, solvents, field-generated sanitary waste, storm water run-off, or other fluids from unapproved sources).

In accordance with COGCC Rule 326.a.(5), mechanical integrity tests (MIT's) shall be performed at 5-year intervals on the Williams GM 943-1D well, as long as it is used for the injection of fluids. The first 5-year period shall commence on the date the initial mechanical integrity test is performed. A MIT is also required after resetting the tubing or packer whenever the tubing or packer is disturbed during workover operations. All injection well MIT's must be witnessed by COGCC Staff.

Remediation is not required for offset wells within one quarter mile of the Williams GM 943-1D well. However, pressure monitoring of selected offset wells is required during injection into the Williams GM 943-1D well, as shown on the attached "Remedial Corrective Action Plan for Wells," which Williams Production RMT Co. submitted as an attachment to Form 31.

Williams Production RMT Co.
Injection Permit Application Approval

October 21, 2009

If you have any questions regarding this approval, please do not hesitate to call me at (970) 625-2497 Ext. 1.

Sincerely,



David D. Andrews, P.E., P.G.
Engineering Supervisor

Enclosures



DEPARTMENT OF NATURAL RESOURCES
John W. Hickenlooper, Governor
1120 Lincoln St. Suite 801
Denver, CO 80203
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FAX: (303) 894-2109
www.colorado.gov/cogcc

July 16, 2012

Mr. Tyler Bittner
Williams Production RMT Co LLC
1058 CR 215
Parachute, CO 81635

RE: Clough RMV 215-21 Injection Well
NESW Section 21, T6S, R94W
Garfield County, Colorado

Dear Mr. Bittner,

The Colorado Oil and Gas Conservation Commission (COGCC) has reviewed the Williams Production RMT Co LLC application to complete the Upper Mesaverde Formation for water injection in the Clough RMV 215-21 Injection Well and has found it acceptable. This letter serves as final approval of the disposal application dated February 8, 2012.

This application has been assigned **UIC Facility Number 159,388** and has a maximum injected fluid volume limitation of **62,730,000 BBL** from the date of this approval. Maximum authorized surface injection pressure has been set at **1825 psig** based on a fracture gradient of 0.84 psi/ft.

Only approved fluids from approved source wells can be disposed of in Class II disposal wells. Approved fluids include produced water, used drilling fluids, used workover fluids, used stimulation fluids, and used fluids from circulation during cementing operations recovered from production, injection, and exploratory wells. The Clough RMV 215-21 Injection Well is currently permitted to inject fluids from wells listed on Form 26 (Source of Produced Water for Disposal) approved on July 16, 2012. Sources of produced water and other approved Class II fluids may be added or deleted by submitting supplemental Form 26s.

A Form 4 (Sundry Notice) must be submitted which includes the date of initial injection. A water analysis of fluids injected into the Clough RMV 215-21 Injection Well is required within one year of commencement of injection. The injected water must be analyzed for total dissolved solids, major cations and major anions. The analytical data sheet must be submitted to COGCC along with a Form 4.

**Clough RMV 215-21 Injection Well
Garfield County, Colorado
Approval for Injection**

The nature of the injected fluids shall be monitored with sufficient frequency to yield data representative of their characteristics. Therefore, a water analysis of fluids injected into the Clough RMV 215-21 Injection Well will be required as a Condition of Approval on supplemental Form 26s when sources are added or deleted. Also, a water analysis of fluids injected into the Clough RMV 215-21 Injection Well will be required at five-year intervals as a Condition of Approval on Form 21s (Mechanical Integrity Test) as required in accordance with COGCC Rule 326.a.(5). Bradenhead pressure shall be monitored regularly.

The volume of all produced water, used drilling fluids, used workover fluids, used stimulation fluids, and used fluids from circulation during cementing operations recovered from production, injection, and exploratory wells injected into this well must be measured and reported on COGCC Form 7 (Monthly Reported of Operations) 45 days following the month covered by the reports.

Class II fluids, other than those described above, must be approved on Form 14A (Authorization of Source of Class II Waste for Disposal) by COGCC Staff prior to injection. These fluids must be reported on Form 14 (Monthly Report of Non-Produced Water Injected).

This well is not permitted for the disposal of fluids that are not Class II waste (e.g., unused stimulation fluids, amine, motor oil, solvents, field-generated sanitary waste, storm water run-off, or other fluids from unapproved sources).

In accordance with COGCC Rule 326.a.(5), mechanical integrity tests (MITs) shall be performed at five-year intervals on the Clough RMV 215-21 Injection Well as long as it is used for the injection of fluids. The first five-year period shall commence on the date the initial MIT is performed. An MIT is also required after resetting the tubing or packer whenever the tubing or packer is disturbed during workover operations. All injection well MITs must be witnessed by COGCC Staff.

If you have any questions on this approval, please do not hesitate to call me at (303) 894-2100 ext. 5145.

Very truly yours,



Denise M. Onyskiw, P.E.
Underground Injection Control Program Supervisor

Cc: Mike Longworth, COGCC

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

FORM APPROVED
OMB NO. 1004-0135
Expires: July 31, 2010

SUNDRY NOTICES AND REPORTS ON WELLS
Do not use this form for proposals to drill or to re-enter an abandoned well. Use form 3160-3 (APD) for such proposals.

SUBMIT IN TRIPLICATE - Other instructions on reverse side.

1. Type of Well <input type="checkbox"/> Oil Well <input checked="" type="checkbox"/> Gas Well <input type="checkbox"/> Other		5. Lease Serial No. COC60846
2. Name of Operator WPX ENERGY ROCKY MOUNTAIN LLC Contact: HOWARD HARRIS Email: howard.harris@wpxenegy.com		6. If Indian, Allottee or Tribe Name
3a. Address 1001 17TH ST., SUITE 1200 DENVER, CO 80202	3b. Phone No. (include area code) Ph: 303-606-4086 Fx: 303-629-8268	7. If Unit or CA/Agreement, Name and/or No. BARCUS CREEK
4. Location of Well (Footage, Sec., T., R., M., or Survey Description) Sec 36 T1N R99W Mer 6PM SENE		8. Well Name and No. FEDERAL BCU 442-36-199
		9. API Well No.
		10. Field and Pool, or Exploratory SULPHUR CREEK
		11. County or Parish, and State RIO BLANCO COUNTY, CO

12. CHECK APPROPRIATE BOX(ES) TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION
<input checked="" type="checkbox"/> Notice of Intent	<input type="checkbox"/> Acidize
<input type="checkbox"/> Subsequent Report	<input type="checkbox"/> Deepen
<input type="checkbox"/> Final Abandonment Notice	<input type="checkbox"/> Fracture Treat
	<input type="checkbox"/> New Construction
	<input type="checkbox"/> Plug and Abandon
	<input type="checkbox"/> Plug Back
	<input type="checkbox"/> Production (Start/Resume)
	<input type="checkbox"/> Reclamation
	<input type="checkbox"/> Recomplete
	<input type="checkbox"/> Temporarily Abandon
	<input type="checkbox"/> Water Disposal
	<input type="checkbox"/> Water Shut-Off
	<input type="checkbox"/> Well Integrity
	<input checked="" type="checkbox"/> Other

13. Describe Proposed or Completed Operation (clearly state all pertinent details, including estimated starting date of any proposed work and approximate duration thereof. If the proposal is to deepen directionally or recomplate horizontally, give subsurface locations and measured and true vertical depths of all pertinent markers and zones. Attach the Bond under which the work will be performed or provide the Bond No. on file with BLM/BLA. Required subsequent reports shall be filed within 30 days following completion of the involved operations. If the operation results in a multiple completion or recompletion in a new interval, a Form 3160-4 shall be filed once testing has been completed. Final Abandonment Notices shall be filed only after all requirements, including reclamation, have been completed, and the operator has determined that the site is ready for final inspection.)

Attached is a revised plan of development that reflects the revised pipeline route for the BCU 442-36-199 pad. The new route will follow the access road to the pad. The new length of the pipeline will be 2330 feet.

- REALTY _____
 - PAT _____
 - PE _____
 - PFT _____
 - GEO _____
 - NRS _____
- AFMSS IN OUT

14. I hereby certify that the foregoing is true and correct.

Electronic Submission #160341 verified by the BLM Well Information System
For WPX ENERGY ROCKY MOUNTAIN LLC, sent to the Meeker
Committed to AFMSS for processing by JEANNE NEWMAN on 11/14/2012 ()

Name (Printed/Typed) HOWARD HARRIS	Title SR. REGULATORY SPECIALIST
Signature (Electronic Submission)	Date 11/14/2012

THIS SPACE FOR FEDERAL OR STATE OFFICE USE

Approved By _____	Title _____	Date _____
Conditions of approval, if any, are attached. Approval of this notice does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.		Office _____

Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

**** OPERATOR-SUBMITTED ** OPERATOR-SUBMITTED ** OPERATOR-SUBMITTED ****

Copy sent to AFMSS only
SEP 2012

Geologist Information

General: New location, Potentially 22 wells (drill 4 first)
Ownership: Federal Surface, Federal Minerals
SUA Status: NA
Spacing Units: Barcus Creek Unit
Adjacent Owners: NA

BCU 23-198

Plan of Development

Access: Use new access as shown on map
Drilling: Efficiency rig
Cuttings: On location in cuttings management area.
SIMOPS: Not for first 4 wells, but yes for full development.
Completion: Frac on pad. Water will be hauled to location.
Flowback: On pad
Prod Equip: Production equipment along west side of road with tie in on the south end of area.
Tank battery in southeast corner of pad.
Pipeline: A gas and 4" water line will be installed from the existing lines at the BCU 12-31-198

Legend

- WPX Producing Well
- Proposed Road
- Proposed Cuttings Management Area
- Proposed Production Equipment Area
- - - Proposed Daylight Line
- Proposed Pad or Pit
- Proposed Culvert (18" CMP)
- Proposed Gas/Water Line Route
- Existing Pipeline
- Existing Water Line
- Existing Pad
- County Road
- Other Existing Road

WPX Energy Rocky Mountain, LLC

BCU 442-36-199 Plan of Development

Date Prepared: November 14, 2012

