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-110-2011-0187-EA

CASEFILE/PROJECT NUMBER: COC61139 (BHL), COD35677 (SHL)
COC73970 (Access road ROW)
COC75335 (Off-Unit Pad ROW)

PROJECT NAME: XTO Energy's Proposed FRU 297-15B1 Well

LEGAL DESCRIPTION: T. 2 S., R. 97 W., Sec. 15, 6th Principle Meridian (Surface Location)

APPLICANT: XTO Energy

PURPOSE & NEED FOR THE ACTION:
The purpose of the action is to allow for 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 by the BLM's responsibility under the authority of the Mineral Leasing Act of 1920 as amended by the Federal Land Policy and Management Act of 1976 (FLPMA) to respond to the request to develop the Federal leases.

Decision to be Made: The BLM will decide whether or not to approve all activities associated with drilling the proposed well and constructing all necessary infrastructure to service, maintain and produce the well. As such, BLM will decide whether or not to approve the proposed activities described in the Application for Permit to Drill (APD) for this well, and if approved, under what conditions.

SCOPING, PUBLIC INVOLVEMENT, AND ISSUES:

Scoping: Scoping was the primary mechanism used by the BLM to initially identify external and internal issues related to the Proposed Action. Internal scoping was initiated when the project was presented to the White River Field Office (WRFO) interdisciplinary team on 5/24/2011. External scoping was conducted by posting this project on the White River Field Office's (WRFO's) on-line National Environmental Policy Act (NEPA) register on 6/30/2011. Comments received were limited to those from internal scoping.

Issues: Though the Proposed Action includes only one proposed appraisal well, the applicant anticipates drilling multiple wells from the proposed well pad. Moreover, though BLM

recommended ExxonMobil (EM) submit the anticipated pipeline route for this well at the onsite, this information was not included in the SUP.

DESCRIPTION OF PROPOSED ACTION AND ALTERNATIVES:

Background/Introduction: This location was onsited by BLM staff and representatives from EM on 5/4/2011. Threatened and Endangered (T&E) plant surveys were completed for the proposed well pad and pipeline corridor that was originally proposed for the Dudley Bluff Plan of Development (POD) in 2010 by Hayden Wing Associates (HWA). HWA confirmed that there are no plant issues with the proposed well pad location. Raptor surveys for the proposed well pad location and the pipeline corridor that was originally proposed for the Dudley Bluff POD were also completed in 2010 by HWA. All nests that were identified in 2010 as part of the raptor surveys for the proposed well pad, access road, and pipeline corridor will be revisited by the applicant's third-party contractor for raptor surveys to assess the breeding season status of each nest structure prior to construction. Survey findings are generally valid for two years. If the proposed disturbance feature is not constructed within two years of the raptor survey, the impacted area(s) would need to be resurveyed for raptor nests during the 2012 breeding season. Because the proposed well is an appraisal well, BLM will require the applicant initiate interim reclamation practices as soon as the well has been drilled and is ready for flaring and/or testing.

Proposed Action: The applicant proposes to construct one well pad, and drill one natural gas appraisal well from this pad. The applicant also proposes to construct an access road to the well pad. The surface hole for this well would be drilled from within ExxonMobil's Piceance Creek Unit (PCU); however, the target bottom-hole location would be in their Freedom Unit (FRU) (Figure 1).

The proposed access road Right-of-Way (ROW) (COC73970) will be 12,489 feet in length and 40 feet in width (total disturbance will equal approximately 12 acres). Approximately 1,401 feet of the 12,489 feet will require new construction to access the well pad. In addition, approximately 2.1 miles of the existing road or 11,088 feet beginning at the existing PCU 297-11B location will be improved by surfacing, drainage improvements, and installation of turnouts. The proposed access road will include a cleared width of 40 ft with an 18 ft running surface. The road will be crowned with two percent cross-slope. The maximum grade for the access road will not exceed 12 percent. Turnouts (10 ft x 100 ft, with 50 ft transitional tapers) will be installed every 1,000 feet. Five, 24-inch diameter culverts will also be installed for cross-drainage. The road will be surfaced to provide all-weather access using 6 inch compacted road base aggregate.

Disturbance Summary

Well pad footprint =	8.3 acres
New road construction =	1.3 acres (1,401 ft x 40 ft)
Road upgrade =	10.2 acres (11,088 ft x 40 ft)
Total Acres Disturbed =	20 acres

For site-specific details pertaining to this application, see Attachment 1.

Operator Committed Conditions of Approval: See Attachment 2.

No Action Alternative: Under the No Action Alternative, ExxonMobil's APD that was submitted for the proposed FRU 297-15B1 well would not be approved and the well would not be drilled.

ALTERNATIVES CONSIDERED BUT NOT CARRIED FORWARD: None.

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

Name of Plan: White River Record of Decision and Approved Resource Management Plan (White River ROD/RMP) (BLM 1997)

Date Approved: July 1, 1997

Decision Number/Page: Page 2-5

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

AFFECTED ENVIRONMENT & ENVIRONMENTAL CONSEQUENCES

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

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

Table 1. Past, Present, and Reasonably Foreseeable Actions

Action Description	STATUS		
	Past	Present	Future
Livestock Grazing	X	X	X
Wild Horses	X	X	X
Recreation	X	X	X
Invasive Weed Inventory	X	X	X

Action Description	STATUS		
	Past	Present	Future
and Treatments			
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 2 lists the resources considered and the determination as to whether they require additional analysis.

Table 2. Resources and Determination of Need for Further Analysis

Determination[1]	Resource	Rationale for Determination
Physical Resources		
PI	Air Quality	See discussion below.
PI	Geology and Minerals	See discussion below.
PI	Soil Resources*	See discussion below.
PI	Surface and Ground Water Quality*	See discussion below.
Biological Resources		
NI	Wetlands and Riparian Zones*	The proposed location is located along a forested, narrow ridge. The project area is separated from Piceance Creek, the nearest system supporting riparian vegetative species by ~0.75 miles of ephemeral channel. Sediment contribution to the system is expected to be nominal and would have no conceivable influence on channel characteristic, aquatic wildlife or associated riparian habitats.

Determination[1]	Resource	Rationale for Determination
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.
PI	Aquatic Wildlife*	Discussion regarding endangered Colorado River fish in Special Status Animal Species section would be directly applicable to other aquatic wildlife. Also see Wetlands and Riparian Zones section.
PI	Terrestrial Wildlife*	See discussion below.
NI	Wild Horses	Wild horses have been found and continue to be found in this area (past, present, and future gathers have been conducted in this area in an attempt to gather these wild horses), however, these wild horses are not located within the designated Piceance-East Douglas Herd Management Area (HMA) therefore this action does not affect the management of wild horses within the HMA.
Heritage Resources and the Human Environment		
NP	Cultural Resources	The project area has been inventoried at the Class III (100 percent pedestrian) level (Lincoln 2011)with no surface manifestations identified in the project area. The potential for unknown subsurface remains is addressed in the 1997 RMP and covered by standard stipulations contained therein.
PI	Paleontological Resources	See discussion below.
NP	Native American Religious Concerns	No Native American Religious Concerns are known in the area, and none have been noted by Northern Ute tribal authorities. Should recommended inventories or future consultations with Tribal authorities reveal the existence of such sensitive properties, appropriate mitigation and/or protection measures may be undertaken.
PI	Visual Resources	See discussion below.
PI	Hazardous or Solid Wastes	See discussion below.
NI	Fire Management	Although the Proposed Action lies within D4 fire management polygon, the sites would require point protection efforts during the management (using AMR) of naturally ignited fires to promote a vegetation mosaic representing a spectrum of successional stages (age classes).
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.
Resource Uses		
PI	Forest Management	See discussion below.

Determination[1]	Resource	Rationale for Determination
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 surface use plan. Exxon-Mobil has described the water rights that may be used for freshwater use. Therefore no impacts are expected.
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		
PI	Areas of Critical Environmental Concern	See discussion below.
NP	Wilderness	There are no WSAs in the project vicinity.
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 2011). The Proposed Action is also located more than 10 miles from any non-attainment or special designation area. Non-attainment areas are areas designated by U.S. Environmental Protection Agency (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 to north and east of the Proposed Action (designated Class I areas). The closest non-attainment area in Colorado is near Denver on the Front Range. 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 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 and completion and, to a lesser extent, long-term impacts if the well is successful from vehicles and gas processing and compression facilities during production. 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.

Additional low, short-term impacts to air quality may occur due to venting or flaring of gas from the wells and VOCs during 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.

Three ozone advisories were issued in February and March of 2011 for Rio Blanco County (CAQCC 2011). These advisories were based on data collected from the Rangely monitoring site showing 1 hour and 8 hour exceedance of NAAQ criteria. Although these exceedances 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.

Soil disturbance resulting from construction, heavy equipment, and drill rigs is expected to result in an increase 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 ($PM_{2.5}$). Particulate matter is made up of a number of components, including acids (such as nitrates and sulfates), organic chemicals, metals, and soil particles. More than 70 percent of PM_{10} (coarse particles) are 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 will occur during the construction and drilling phases,

especially when conditions are dry and/or windy. Particulate matter is a major contributor to reductions in visibility, due to its 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 only occur 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 the immediate vicinity and 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 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 result due to the Proposed Action. Even with these increased pollutant emissions 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, nacholite mining, coal-fired power plants, coal mines, sand and gravel operations, windblown dust from natural sources, wildfires, and prescribed burns (CAQCC 2010). 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 and White 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 Unita 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. Exxon-Mobil will limit unnecessary emissions from point or nonpoint air 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.

GEOLOGY AND MINERALS

Affected Environment: Surficial geology of the well pad is the tertiary Uinta formation (Tweto) and ExxonMobil's targeted zone is in the Mesaverde. During drilling potential water, oil shale, sodium, and gas zones will be encountered from surface to the targeted zone. Aquifer zones that will be encountered during drilling are the Perched in the Uinta, the A-groove, B-groove and the Dissolution Surface in the Green River formation. These aquifer zones along with the Wasatch formation are known for difficulties in drilling and cementing. Oil shale and sodium resources are located in the Green River formation. The well pad is located in the area identified in the ROD/RMP as available for oil shale leasing. Surface location of the Proposed Action is within ExxonMobil's Piceance Creek Federal Oil and Gas Exploration Unit (COC 47666X) and the bottom hole is approximately 0.5 miles south and east of the surface location and within ExxonMobil's Freedom Federal Oil and Gas Exploration Unit (COC 69547X). These exploratory oil and gas units are currently utilizing 20 acre bottom hole spacing for full field development in the recovery of natural gas resources of the Mesaverde formation. Colorado Oil and Gas Conservation Commission (COGCC) database does not identify any producing oil and gas well locations within a one mile radius of the bottom hole location for FRU 297-15B1well The nearest producing well is slightly more than one mile from the bottom hole location.

Environmental Consequences of the Proposed Action:
Direct and Indirect Effects: Lost circulation or problems cementing the surface casing in the proposed well may affect freshwater aquifer zones in the Green River formation. The cementing procedure of the Proposed Action isolates the formations and should prevent the migration of gas, water, and oil between formations including sodium, oil shale and coal zones. Conventional recovery of the coal resources is not considered feasible at the depths encountered in the wells. Development of the well would deplete the natural gas resources within the well reservoir drainage area of the targeted formation.

Cumulative Effects: An additional 99 wells for full development of the natural gas resources in the Mesaverde Formation within this one mile radius would be required if bottom hole spacing of 20 acres is utilized for the recovery of the natural gas resources. Full development of the natural gas resource could preclude the future recovery of oil shale resources until the existing natural gas resources are exhausted.

Environmental Consequences of the No Action Alternative:
Direct and Indirect Effects: The oil and gas resources in the targeted zones would not be developed at this time and would remain available for future recovery.

Cumulative Effects: There would be no contribution to the recovery of oil gas resources.

Mitigation: None

SOIL RESOURCES

Affected Environment: The classifications of soils within 30 meters (98.4 feet) of the proposed surface disturbance and could be impacted by the Proposed Action are shown in Table 3. There are no fragile soils or soils prone to landslides on Federal lands that will be impacted by this project. There are some soils with slopes greater than 25 percent that will be impacted by the pad construction, but no soils with slopes greater than 35 percent. The access road will follow a well-used bladed road and a smaller two track to the pad site. Both will be improved to resource or local road standards with turn-outs as described in the surface use plan.

Table 3. Soil Classifications within 30 Meters of the Surface Disturbance Proposed and/or the Centerline of Roads.

Soil Classification	Range Site Description	Potentially Impacted Acres
Rentsac channery loam, 5-50 percent slopes	PJ Woodlands	18
Redcreek-Rentsac complex, 5-30 percent slopes	PJ Woodlands	1

The pad site is in Rentsac channery loam soils, which are shallow well drained soils on ridges formed from sandstone containing calcium carbonate. Channery loams contain sandstone rock fragments that are imbedded in the surface soil, flaggy or bigger rock fragments are encountered lower in the soil profile and sandstone may be encountered 10 to 20 inches below the surface. Runoff is rapid and the hazard of water erosion is moderate to very high in these soils.

Environmental Consequences of the Proposed Action:

Direct and Indirect Effects: The Proposed Action would directly disturb an estimated 10 acres for the well pad construction and the entrance road to the pad from the improved access road. Additional disturbance will occur that is associated with the road upgrades, mostly to build turn-outs and drainage features on the main access road. With proper BMPs for stormwater, construction practices, reclamation practices and mitigation described below impacts to soils outside the 30 meter buffer around surface disturbance is not expected.

Direct impacts from the construction of the well pad and the access road improvements 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 because of 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 indirect impacts to soils off the construction site such as increased runoff and erosion. Implementation of BMPs 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 BMPs 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 production equipment and if these spills occurred they would affect the productivity of soils.

Cumulative Effects: Well pads in the general area are likely to occur at about a 2-3 well pads per square mile and will include surface disturbance and reclamation of other well pads, pipelines, roads and support facilities. Livestock grazing occurs on public and private lands in the area and may reduce canopy cover and lead to localized erosion in some areas. No other impacts other than oil and gas development and livestock are expected near the project area. 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.

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: None. See Operator Committed Conditions of Approval (Attachment 2).

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 pad site is on a ridge that drains into ephemeral tributaries to Piceance Creek. Table 4 describes the surface water segments that may be impacted by this project.

Table 4. Water Quality Classification

Segment	Segment Name	Use Protected	Protected Beneficial Uses			
			Aquatic Life	Recreation	Agriculture	Water Supply
15	Mainstem of Piceance Creek from below Ryan Gulch and Dry Fork of the Piceance including tributaries	No	Warm 2	Primary Contact Recreation	Yes	No

16	All tributaries to Piceance Creek from the source to the confluence with the White River	No	Warm 2	Primary Contact Recreation	Yes	Yes

* Colorado Department Of Public Health And Environment, Water Quality Control Commission, Regulation No. 37 Classifications and Numeric Standards For Lower Colorado River Basin, Effective January 1, 2012

Segments 15 and 16 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.

Groundwater: Precipitation in this area generally moves from areas of recharge to surface waters via alluvial aquifers and on the surface during spring melt and rain storms. A portion of annual precipitation infiltrates to deeper bedrock aquifers that contribute to contact springs. Springs and 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, lean oil shale zones and siltstones of the Green River Formation above and below the Mahogany Zone or from fractured marlstone and sandstones of the saturated portions of the overlying Uinta Formation. Perched groundwater zones occur locally within the Uinta Formation when these saturated zones contact the surface. These perched 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. Stormwater measures and best management practices including periodic monitoring of any erosion problems would be essential to avoid erosion and increased sedimentation to surface waters.

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 Piceance Creek 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 BMPs for stormwater.

Groundwaters: As described in the Affected Environment, aquifers in the Project Area include the Tertiary Uinta-Animas aquifer, and the Cretaceous Mesaverde aquifer. The latter aquifer represents the principal target of the Proposed Action and would be located at depths of 7,000 feet or greater, according to existing well data. The Uinta-Animas aquifer consists of portions of the Green River and Uinta formations and is generally divided into upper and lower units by the

Mahogany zone of the Parachute Creek Member of the Green River Formation, which retards water movement vertically.

In addition to multiple zones in the Unita there are two zones of potential water (A-groove and the B-groove) in the Parachute Member of the Green River formation are anticipated to be drilled through; the deepest of these zones is estimated at 1,000 feet below the surface according to the drilling plan. These zones would be protected by installing a surface casing to a depth of approximately 3,600 feet and cementing behind this casing to the surface. There would also be an intermediate casing from about 8,000 feet to the surface and would also have cement installed behind the casing and this intermediate casing would go through the Wasatch formations and be set below the Williams Fork, based on the drilling plan. 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 through. If drilling fluids are lost groundwater aquifers, aquifers may be contaminated by drilling additives. Exxon-Mobil has committed to using bentonite, freshwater and other additives that are not likely to contaminate groundwater to drill the surface casing. Produced water and other additives could and would be used to drill the intermediate and production well bores once the surface casing is in place.

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.

The production zones are between 10,000 to 13,000 feet below the surface in the Mesaverde and do not contain freshwater. Hydraulic fracturing in the production zones is designed to change the physical properties of the formations 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 and hydraulic fracturing activities would mostly be pumped back out before production.

Left over fluids will be flowed back to the lined reserve pit and trucked or piped to a class II injection well or an approved disposal facility before the reserve pit is closed. The reserve pit will be tested before closure to meet COGCC standards and the pit liner will be removed for disposal in a proper facility, probably the Rio Blanco County Landfill. If solid material in the reserve pit does not meet COGCC requirements it will be hauled to a proper disposal facility, Exxon-Mobil has identified two possible facilities in the surface use plan. Therefore, impacts to shallow groundwater quality from these fluids are not expected.

Known groundwater bearing zones in the project area would be protected by 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 are likely to occur at about a 2-3 multi-well pads per square mile and will include surface disturbance and reclamation of other well pads, pipelines, roads and support facilities. Livestock grazing occurs on public and private lands in the area and may reduce canopy cover and lead to localized erosion in some areas. No other impacts other than oil and gas development and livestock are expected near the project area. In general, the Proposed Action and other activities could increase sedimentation, but it is unlikely that water quality would be impacted in Piceance Creek or freshwater aquifers.

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. Exxon-Mobil will monitor pits regularly when containing liquid to identify potential leaks. Pits shall be constructed, monitored, and operated to provide for a minimum of two (2) feet of freeboard at all times and maintain fluids in pits. If the operator believes one of the pits has leaked the AO should be notified immediately and all liquids should be removed and properly disposed of off-site. Exxon-Mobil will remove all oil from reserve pits within 24 hours and dispose of it in a proper disposal facility.

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 (includes a finding on Standard 3)

Affected Environment: The proposed project area is classified as a pinyon-juniper woodland ecological site. The understory in this area is currently a mix of cool-season perennial grasses and forbs with an overstory of pinyon-juniper. Cheatgrass (*Bromus tectorum*) is present at a low level throughout the general project area in association with areas of disturbance. The site is currently meeting public land health standards. Table 5 outlines the ecological site and associated vegetation within the proposed project area.

Table 5: Ecological Site and Associated Plant Community

Ecological Site	Plant Community	Acres
Pinyon Juniper woodlands	Indian ricegrass, beardless wheatgrass, prairie junegrass, mountain mahogony, bluebunch wheatgrass, western wheatgrass, and bottlebrush squirreltail	10

Environmental Consequences of the Proposed Action:

Direct and Indirect Effects: Implementation of the Proposed Action would result in the removal of approximately ten acres of pinyon-juniper overstory and the herbaceous understory. The disturbance would result in increased risk for the spread of noxious and/or invasive species and their potential spread into the adjacent plant community. The total disturbance associated with the construction of the well pad and access road would be relatively short term. More than half of the area disturbed would be revegetated in interim reclamation. The greatest long-term impact on vegetation would be the loss of the native shrub component associated with the disturbed site. Shrubs would likely begin to return to reclaimed areas within 10 years following interim reclamation. When final reclamation actions occur, portions of the site would be returned to a pre-disturbance herbaceous state. Only the production area of the well pad and the road travel surface would remain non-vegetated for the life of the project, which could vary depending upon the success and life expectancy of the well.

Cumulative Effects: The Proposed Action would not add substantially to current or future disturbances within the project area. This project area currently has healthy and diverse plant community composition; therefore the removal of 10 acres of pinyon-juniper vegetation is not expected to have any measurable influence on the overall plant community.

Environmental Consequences of the No Action Alternative: There will be no change from the present situation.

Direct and Indirect Effects: There would be no action authorized that would have any direct or indirect influence on downstream riparian communities.

Cumulative Effects: None

Mitigation:

1. The BLM recommends BLM seed mix #3 as modified, shown in Table 6 below, for use in seeding both interim and final reclamation. Additional forbs have been added to address concern for special status plant species (see *Special Status Plant Species* for more details).

Table 6. BLM Recommended Seed Mix #3 with forb additions

Rosana	Western Wheatgrass	*Pascopyrum smithii*	3
Whitmar	Bluebunch Wheatgrass	*Pseudoroegneria spicata ssp. inermis*	3.5
Rimrock	Indian Ricegrass	*Achnatherum hymenoides*	3
	Needle and Thread Grass	*Hesperostipa comata ssp. comata*	2.5

Maple Grove	Lewis Flax	*Linum lewisii*	1
	Scarlet Globemallow	*Sphaeralcea coccinea*	0.5
	Rocky Mountain Beeplant	*Cleome serrulata*	1
	Northern Sweetvetch	*Hedysarum boreale*	2
	Sulphur Flower Buckwheat	*Eriogonum umbellatum*	1.5

2. Currently this is a winter use area for livestock grazing so it is not likely that livestock grazing would hinder revegetation efforts. However, if it becomes evident that livestock use is hindering reclamation efforts, the BLM would recommend fencing the pad.

Finding on the Public Land Health Standard for plant and animal communities (partial, see also Wildlife, Aquatic and Wildlife, Terrestrial)*:* Upland plant communities currently meet the Standard and are expected to continue to under the Proposed Action.

INVASIVE, NON-NATIVE SPECIES

Affected Environment: The proposed project is generally in undisturbed mid to late-seral pinyon juniper woodlands. There are several species of Colorado listed noxious weeds in the general area. Colorado has three designations for noxious weeds that occur within the state. List A species are designated for eradication, List B noxious weeds have, or will have, a state noxious weed management plan developed to stop their spread, and List C species are species that parties will develop and implement state noxious weed management plans designed to support the efforts of local governing bodies to facilitate more effective integrated weed management on private and public lands. The goal of these plans will not be to stop the continued spread of these species but to provide additional education, research, and biological control resources to jurisdictions that choose to require management of List C species (Colorado Department of Agriculture 2011).

No List A species are known to exist around the project area, however there are several List B species. List B species known to occur around the project area include houndstongue (*Cynoglossum officinale*), mullein (*Verbascum thapsus*), Russian, spotted, and diffuse knapweeds (*Centaurea sp*), bull thistle (Cirsium vulgare), yellow toadflax (*Linaria vulgaris*) and black henbane (*Hyoscyamus niger*).

Cheatgrass is the primary List C species located in the general area. This invasive annual grass is scattered throughout the general area primarily in association with areas of unrevegetated earthen disturbance along roads, pipelines, on well pads, or in areas where livestock congregate.

Environmental Consequences of the Proposed Action:

Direct and Indirect Effects: Soil disturbance associated with pad and road construction creates potential for weeds to establish on the site and move out into the surrounding plant community. The Proposed Action will create about 10 acres of new earthen disturbance. There is also the potential for weed seeds and propagules to be transported onto the site on construction equipment creating a risk of introducing more or new weed species to the area.

Cumulative Effects: Past and present land uses such as oil and gas development and livestock use in the vicinity of the proposed project has contributed to the introduction and spread of many invasive and noxious weeds. It is anticipated that oil and gas development and livestock grazing will continue in the area and there is a high potential for weeds to spread. Active weed control measures will help reduce the spread of weeds.

Environmental Consequences of the No Action Alternative:

Direct and Indirect Effects: There will be no change from the present and the opportunity for weeds to spread into this site will be minimized.

Cumulative Effects: There will not be any direct or indirect effects to add to potential cumulative effects within the project area.

Mitigation:

1. The operator must monitor the project area and surrounding area of influence for noxious and invasive weeds through final abandonment. List A and List B weed species will be eradicated. List C weed species will be controlled to prevent them from affecting native plant communities.

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 (approximately 50 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 concentration 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 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 sucker and mountain sucker inhabit Piceance Creek. Northern leopard frogs are common along the Piceance Creek channel.

Northern Goshawk: Mature components of PJ woodlands encompassing the project area may provide suitable nest substrate for northern goshawk. This species typically prefers to nest in contiguous aspen or mixed coniferous forests. 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 0.60 miles from the proposed well location

BLM-sensitive bat species: Although the distribution of bats in the WRFO is not completely 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. Mature components of PJ woodlands which may provide temporary daytime roosts for small numbers of bats are fairly extensive in the project area. Relatively extensive riparian communities are available along Piceance Creek (approximately 0.75 miles 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 to 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 extremely 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: 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.

The Proposed Action would result in the direct removal of approximately 10 acres of mid-aged to mature PJ woodlands. This acreage would remain unavailable as nesting substrate for woodland raptors (northern goshawk) for the life of the project and beyond (up to several hundred years). Indirectly the Proposed Action would likely influence (suppress) future nesting opportunities in much of the remaining functional woodlands along the ridgeline (22 to 30 additional acres) due to alterations in stand character. Raptor surveys were conducted in July and August 2010. Four nests were located within the survey area and three just outside the survey boundary (HaydenWing 2010). An active red-tailed hawk nest was located approximately 700 meters (2,297 feet) from the proposed well location. There was no evidence that the remaining nests had been occupied during the 2010 nesting season. No goshawk nests were observed within the survey area.

Construction activities that take place during the nesting season could directly influence nesting outcomes, resulting in displacement of adults, nest abandonment and subsequent nest failure if nests are in close proximity to areas of activity (pads, roads etc.). Should construction activities extend into the breeding season, returning birds would select nest sites in the face of ongoing disturbances and may avoid functional woodlands due to increased human activity (noise, traffic etc.). Earthwork and construction activities confined to the non-breeding season would have virtually no direct influence on nesting activities although indirect impacts, as discussed above may be expected. Nest locations observed during the 2010 surveys would need to be revisited prior to construction initiation. If a nest(s) are found to be active, appropriate timing stipulations would be applied.

It is unknown what influence the removal of 10 acres of PJ may have on BLM-sensitive bat species or to what extent these woodlands are utilized by bats. Based on the availability of rock outcrops (as roosting substrate) in the vicinity of the project area, it is unlikely these woodlands receive substantial use by bats.

The Proposed Action is not expected to have any substantial influence on local populations of Brewer's sparrow due to the minimal amount of sagebrush involvement.

Pad and road construction is not anticipated to have any direct influence on aquatic resources. With the application of best management practices (BMPs) associated with soil erosion there is no reasonable likelihood that fugitive sediments would have any influence on the function or condition of the Piceance Creek channel, its aquatic wildlife or associated habitats. See above discussions on water depletions.

Cumulative Effects: See discussions in both *Migratory Bird and Terrestrial Wildlife* sections.

Environmental Consequences of the No Action Alternative:

Direct and Indirect Effects: There would be no direct or indirect influence on 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: None.

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.

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 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.

Species	Status[1]	Habitat Description	Potential to Occur in the Proposed Project Area
Physaria congesta (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.
Physaria obcordata (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.

[1] T = Threatened

The project area was surveyed in 2010 by Hayden-Wing Associates, LLC and no occupied habitat was found within 600 meters of the project area. Marginally suitable habitat was found within 60 meters of the project area and highly suitable habitat was found approximately 350 meters from the project area. There are 20.5 acres of marginally suitable

habitat and 73.6 acres of highly suitable habitat within 1 mile of the Proposed Action. The closest known population of the twinpod is approximately 700 meters to the southwest and this element occurrence is one of the southernmost known populations of the species. The closest known bladderpod population is over 1,000 meters to the north. The Dudley Bluffs ACEC was designated to protect *Physaria* species plant communities and the boundary is less than 50 m from the edge of disturbance from the proposed project.

Environmental Consequences of the Proposed Action:

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. 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). There are three known twinpod populations within 0.6 miles of the Proposed Action that could be potentially indirectly impacted by the loss of pollinators nesting sites. 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 any possible new populations. Some other impacts may include an increase in non-native species invasion, fragmentation of pollinator habitat, and possible increase of human disturbance because of access on updated or newly created 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 18 percent of proposed or previous disturbance 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. There is marginally suitable habitat within 60 meters (197 feet) of the project area and 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 before May 2013 or if any ground disturbing activities associated with the project occur after May 2013, the suitable and marginal habitat in the area 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 with 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.

Additionally, two forbs (Rocky Mountain beeplant 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, should have no influence on the status of applicable Land Health Standards.

MIGRATORY BIRDS

Affected Environment: The proposed well location and access road are largely encompassed by mixed age to mature pinyon-juniper woodldands. The understory is typically sparsely vegetated with native perennial grasses and forbs and scattered Wyoming big sagebrush and serviceberry (see Vegetation section). Cheatgrass is present but at extremely low densities. These woodland 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 the U.S. Fish and Wildlife Service (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 if not given due consideration in land use decisions. Three PJ 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.

The development of reserve pits that contain drilling fluids have attracted waterfowl 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: The Proposed Action would initially remove approximately 10 acres of mixed age to mature pinyon-juniper (PJ) woodlands. Following natural succession regimes, these communities would take anywhere from 200 – 500 years (depending on age of PJ) to return to preconstruction conditions following reclamation and as such would not provide habitat for PJ associates for the life of the project and beyond. Prompt and effective interim reclamation would likely enhance forage and cover availability for grassland associates in the short-term.

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 28 acres 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.

It has been brought to BLM's attention that in certain situations migratory waterfowl 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 location is located in a heavily developed portion of Piceance Basin. The Proposed Action would remove another 10 acres of pinyon-juniper woodlands for the life of the project and up to several hundred years beyond. While the removal of 10 acres of PJ woodlands in and of itself may not constitute a substantial loss in available habitat, cumulatively speaking, the impacts may be far greater. For example, within a one mile radius of the proposed location, there are approximately 116 acres of existing disturbance or proposed areas of disturbance (excluding roads and pipelines). Based on rough estimates of available PJ woodlands (both mature and immature) in the projected one mile buffered area, existing and proposed disturbances, including the proposed location, have removed or may potentially involve approximately seven percent of woodland communities. It is likely that development of this pad would have negligible influence on migratory bird (including raptors) populations with the basin in its entirety (likely < 1 – 2 percent habitat involvement), but on fairly localized level the influence may be more pronounced.

Environmental Consequences of the No Action Alternative:

Direct and Indirect Effects: There would be no direct or indirect impacts to migratory birds 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. Vegetation removal associated with well pad and road development will take place outside the migratory bird nesting season of May 15 through July 15.

TERRESTRIAL WILDLIFE

Affected Environment: The surrounding pinyon-juniper woodlands and to a lesser extent, sagebrush communities are categorized by Colorado Parks and Wildlife (CPW) as mule deer severe winter range – a specialized component of winter range that supports 90 percent of the herd during the worst winters (e.g. low temperatures and deep snowfall). These ranges typically receive heaviest use from October through April.

Mature components of PJ woodlands and rock outcrops (farther removed) which surround the proposed pad and access location may provide suitable nest substrate for woodland raptors (accipitrine and buteo species, long-eared and saw-whet owls) and golden eagle. There are several known nest locations within the vicinity of the project area (Hayden Wing 2010).

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 PJ 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 roughly 10 acres of predominately mid-aged to mature pinyon-juniper woodlands. Based on the age of the stand, these trees may take upwards of 500 years to return to preconstruction conditions resulting in long-term habitat loss for woodland raptors and pinyon-juniper associated species (see Migratory Bird section) as well as a cover resource for big game. The Proposed Action would represent an incremental loss in mule deer severe winter range and while independently may not constitute a substantial loss in habitat; there are cumulative connotations (see discussion below).

Construction activities occurring during the winter months would have greater potential to displace local big game populations as deer tend to congregate in lower elevation pinyon-juniper and sagebrush communities during these timeframes. This may lead to reduced reproductive success and nutritional condition due to an increase in energy expenditure resulting from the physical response (movement, avoidance) to activities (construction, traffic, drilling etc.).

Indirectly, the Proposed Action could behaviorally influence deer up to two miles from the project area (Sawyer et al. 2006), particularly if intense development activities occur during the winter months. It should be noted however that topographical features vary drastically between

Piceance Basin and Sawyer's study area (flat to rolling, open sagebrush vs. wooded ridgelines) which may reduce indirect disturbances.

The proposed pad and road location is located in an area which the WRFO has formerly granted exceptions to winter drilling stipulations via an agreement between WRFO, CPW and ExxonMobil involving about 21,000 acres on Magnolia south of Hatch Gulch, or about 13 percent of the severe winter range available in Game Management Unit 22. This agreement was intended to support CPW big game research and promote a drilling strategy that accelerates development timeframes in a localized area as means to abbreviate the time wintering deer are exposed to intense development activity in any given area.

Discussion regarding northern goshawk in *Special Status Animals Species* section is directly applicable to woodland raptors.

Cumulative Effects: The long-term occupation on approximately 10 acres of mule deer severe winter range is fairly minor in the context of like habitats available throughout the Piceance Basin; however, the localized influence may have a more pronounced effect on forage availability and local big game distribution. Within the past 5 - 7 years the project area has experienced a substantial increase in development, concentrated mainly on the ridge tops to the northwest, north and northeast (e.g., within two mile radius of project area, ~464 acres or 6 percent of disturbance or proposed disturbance associated solely with oil and gas-related activities, excluding roads and pipelines). Although many of the surrounding pads are multi-well pads (this location, although currently proposed as a one well pad, will likely become a multi-well pad) which substantially reduce the extent and distribution of forage and cover resources dedicated to access roads, pipelines associated with development of individual well pads; cumulative impacts from intense development would be expected to affect big game behavior to some degree at the local scale. It should be noted that the benefits of multi-well pads (with respect to wildlife) would be diminished without timely and effective reclamation. Interim reclamation on the proposed location would help offset herbaceous forage losses and accelerate the reestablishment of woody forage and cover components for all resident wildlife.

Discussion in Migratory Bird section would be directly applicable to woodland raptors.

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. No activities (construction, drilling etc.) will be allowed within mule deer severe winter range from December 1 – April 30 to reduce adverse behavioral effects on wintering big game (WRRA ROD TL-08). These timing stipulations may be subject to exception/modification provisions addressed in the WRFO RMP.

2. Prior to construction initiation, nest structures located in the 2010 raptor survey (HaydenWing 2010) will be revisited. If a nest(s) are determined to be active no construction activities will be allowed until July 15 or until young have fledged and left the nest stand (WRRA RMP/ROD TL-01 and 04). No surface occupancy will be allowed within 1/8 – ¼ miles of identified nest sites (WRRA RMP/ROD NSO-02 and 03).

3. Raptor survey report products and survey methodology will follow established guidelines and procedures described in Smithers 2012.

4. All raptor nests (e.g., stick-built structures, nest cavities, eyries, etc.), regardless of their breeding or non-breeding season status, are to be reported to WRFO NRS, Brett Smithers via phone (970.878.3818) or by E-mail (bsmither@blm.gov; preferred) within 24 hours of the observation.

5. The following information will be provided when reporting raptor nests to BLM:

    - the species observed using the nest, if applicable;
    - UTM coordinates for each nest (recorded in NAD83, Zone 12);
    - the status of the nest (e.g., occupied, unoccupied, unknown)
    - the condition of the nest (e.g., excellent, good, poor, fallen out of tree) (see Smithers 2012)
    - the date the nest was re-visited (for known nests) or first documented (for newly found nests);
    - brief summary describing adult and/or juvenile behavior and number of nestlings observed, if applicable;
    - project name and NEPA document number, if applicable.

Finding on the Public Land Health Standard #3 for Plant and Animal Communities: The project area generally meets the land health standards on a landscape scale. The Proposed Action is expected to incrementally reduce local habitat capacity over the life of the project. As conditioned by reclamation-related provisions, implementation of the Proposed Action would not interfere with continued landscape level maintenance of the land health standards.

PALEONTOLOGICAL RESOURCES

Affected Environment: The proposed well pad location and access is located in an area generally mapped as the Uinta Formation (Tweto 1979) which the BLM, WRFO has classified as a PFYC 5 formation meaning it is known to produce scientifically noteworthy fossil resources (c.f. Armstrong and Wolny 1989).

Environmental Consequences of the Proposed Action:

Direct and Indirect Effects: If it becomes necessary to excavate into the underlying sedimentary rock formation to construct the access road, level the well pad or excavate the reserve/blooie/cuttings pit, or other facilities related to pad and road construction, there is a potential to impact scientifically noteworthy fossil resources.

Cumulative Effects: If there are any impacts to fossil resources as a result of any actions related to the construction of the well pad and associated facilities there would be an irreversible, irretrievable net lost to the regional paleontological database. The magnitude of the loss would depend on the nature of the fossils impacted and the effectiveness of any data recovery operations implemented during construction.

Environmental Consequences of the No Action Alternative:

Direct and Indirect Effects: There would be no new or different impacts to paleontological resources under the No Action Alternative. There would be no construction related impacts though the normal geological weathering process would continue as it has for millennia with fossil being slowly exposed and potentially lost in the process. Smaller more fragile fossil would be more susceptible to loss than larger fossils.

Cumulative Effects: The cumulative effects of impacts to paleontological resources under the No Action Alternative would be consistent with impacts that would occur if no development ever occurred in the region. Loss would be very slow but cumulative, irreversible and irretrievable.

Mitigation:

1. ExxonMobil 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, ExxonMobil or any of their 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.

VISUAL RESOURCES

Affected Environment: The Proposed Action is planned on Magnolia Bench, an area that is currently being developed for natural gas exploration and production. Magnolia Bench is within a visual resource management (VRM) Class III area. This class area is to be managed so that the activities do not dominate the view but may attract some attention, as well as being managed to partially retain the existing character of the local landscape. The Magnolia Bench area has many disturbances related to natural gas development that attract attention due to the size and nature of

the developed features. Surface disturbances range from compressor stations to well pads and the entire infrastructure that is required to operate them. The access roads and pipeline disturbances fragment the vegetative structure and are easily identified from a distance as a surface disturbance. Most users to this area are energy development workers, local ranchers and occasional recreationists, depending on time of year.

Environmental Consequences of the Proposed Action:

Direct and Indirect Effects: The Proposed Action would introduce un-natural breaks in line, form, color and texture through the removal of vegetation, soil disturbance and the introduction of man-made facilities. The Proposed Action would be located adjacent to an existing un-numbered BLM road making it visible to the casual observer. After the completion of final reclamation and removal of all facilities, the disturbed areas will be returned to their original condition, leaving little evidence of disturbance. As such, the Proposed Action is consistent with the standards of the VRM III classification and with mitigation, the objectives of this class will be maintained.

Environmental Consequences of the No Action Alternative:

Direct and Indirect Effects: As the project would not take place, there would be no impacts to visual resources under the No Action Alternative.

Cumulative Effects: Combined with other on-going surface disturbing energy development projects in the area, the Proposed Action will cumulatively contribute to a visually impacted landscape.

Mitigation:

1. All permanent (onsite for six [6] months or longer) structures, facilities and equipment placed above ground will be painted Juniper Green form the BLM Standard Environmental Color Chart, CC-001: June 2008.

HAZARDOUS OR SOLID WASTES

Affected Environment: There are no known hazardous or other solid wastes on the subject lands. No hazardous materials are known to have been used, stored, or disposed of at sites included in the project area.

Environmental Consequences of the Proposed Action:

Direct and Indirect Effects: 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).

Cumulative Effects: The Proposed Action should not contribute to adverse impacts to human health and/or the environment if the SUP as proposed is properly implemented, and the following mitigation measures are adhered to.

Environmental Consequences of the No Action Alternative:

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

Cumulative Effects: Not implementing the Proposed Action would reduce the risk of harm to human health and/or the environment by one well, but the No Action Alternative would not substantially result in a cumulative change to the resource area.

Mitigation:

1. 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.

FOREST MANAGEMENT

Affected Environment: The Proposed Action is located within the productive stand classes of Pinyon/Juniper woodlands as defined by a survey performed by White River Field Office 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 stands are both mixed age to mature pinyon-juniper. Mature pinyon/juniper trees on productive exposure establish themselves as the dominant plant community on the site. Younger pinyon/juniper trees are a component of the plant community or encroach into sagebrush and mountain shrub communities in the absence of reproduction through time and will eventually establish as the dominant plant community. Mature stands are valuable locally as a source of fire wood. Encroachment sites of young pinyon trees are valuable for Christmas tree harvest and posts for fence construction.

The Proposed Action would initially remove approximately 10 acres of mixed age to mature pinyon-juniper (PJ) woodlands. Following natural succession regimes, these communities would take anywhere from 200 – 500 years (depending on age of PJ) to return to preconstruction conditions following reclamation and as such would not provide habitat for PJ associates for the life of the project and beyond. Prompt and effective interim reclamation would likely enhance forage and cover availability for grassland associates in the short-term.

Environmental Consequences of the Proposed Action:

Direct and Indirect Effects: The following table 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 250-500

years (depending on age of PJ) years. Under the Proposed Action about 10 acres of woodlands would be removed. The loss of pinyon/juniper woodland would adversely affect wildlife and nesting habitat. Impacts would be long-term until woodlands regenerate successfully.

Well Name	Acreage In Woodlands					
	Pad Acres	Access Rd. (Ac)	Pipeline	Acres Disturbed (Total)	Stand Class	Total Cords
FRU 297-15B1	8.3	1.7	0	10	Mature Productive Exposure	100

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

Environmental Consequences of the No Action Alternative:

Direct and Indirect Effects: Under this alternative there would be no construction of the wellpad and no removal of juniper woodlands.

Cumulative Effects: Under this alternative there would be no construction of the wellpad and no removal of 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 percent 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) 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.

RANGELAND MANAGEMENT

Affected Environment: The Proposed Action occurs within the McKee/Collins grazing allotment #02966. This allotment is a winter use allotment used by the Slash EV (0504472 and 0501408) and MTW (0501407) ranches. Permitted use for each of these operators is listed below.

Allotment	Authorization #	Livestock # & Kind		Period of Use	Percent Public Land	Authorized Use (AUM)
McKee/Collins #02966	0504472	103	Cattle	12/1 – 12/30	100	105
		68	Cattle	1/1 – 1/30	100	67
	0501408	182	Cattle	12/1 – 12/30	100	185
		91	Cattle	1/1 – 1/30	100	90
	0501407	103	Cattle	12/1 – 12/30	100	105
		68	Cattle	1/1 – 1/30	100	67

Environmental Consequences of the Proposed Action:

Direct and Indirect Effects: If construction and drilling occur when livestock are present they may avoid the general area during that period of intensive activity. After development, livestock may use the pad for a loafing area if it is not fenced. Livestock grazing of seeded vegetation would be during the dormant season and would have reduced impact on vegetation reestablishment. Minimal forage loss for livestock is expected from this action. In the short term there will be a net loss of less than 1 Animal Unit Month (AUM) of forage production as a result of the Proposed Action. After desirable perennial vegetation is reestablished on the majority of the disturbed area forage loss will be further reduced. In the long term, after final reclamation there would be an overall net increase of forage production until the seral state progresses back to woody (pinyon juniper) dominated site.

Cumulative Effects: Future oil and gas development will result in continued incremental forage losses. As reclamation reestablishes desirable vegetation forage losses will be reduced and in some cases there will be a small, temporary net gain in forage available for livestock use.

Environmental Consequences of the No Action Alternative:

Direct and Indirect Effects: The proposed pad and access road would not be built and there would be no effect to livestock.

Cumulative Effects: There would be no conceivable effect to livestock.

Mitigation: None.

REALTY AUTHORIZATIONS

Affected Environment: The surface location is located within the Piceance Creek Unit boundary; however, the bottom-hole location is located within the Freedom Unit. The off-unit pad and access road will require rights-of-way (ROW). The following table describes the existing ROWs in the area of the proposed pad and access road.

Table 7. Existing ROWs in the Project Area

Case File	Holder	Authorized Use
COC20507	Rocky Mountain Natural Gas	Natural Gas pipeline
COC70684	Whiting Oil & Gas Corporation	Natural Gas pipeline
COC0124497	Public Service Company of Colorado	Natural Gas pipeline
COC49117	United States Geological Service	Water monitoring well

Environmental Consequences of the Proposed Action:

Direct and Indirect Effects: The access road ROW COC73970 will consist of 12,489 feet with a width of 40 feet for a total disturbance of 11.47 acres. Approximately 1,401 feet of the 12,489 feet will be new road constructed to access the well pad. In addition, approximately 2.1 miles of existing road, (11,088 feet) beginning at existing well pad PCU 297-11B, will be improved by surfacing, drainage improvements and installation of turnouts. The new access road will feature a cleared width of 40' with an 18' wide running surface. The road will be crowned with 2 percent cross-slope. The maximum grade for the access road will not exceed 12 percent. Turnouts (10 ft x 100 ft, with 50 ft transitional tapers) will be installed every 1,000 feet. Five, 24 inch diameter culverts will also be installed for cross-drainage. The road will be surfaced to provide all-weather access using 6 inch compacted road base aggregate. 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. Damage to county roads from trenching and heavy equipment use may also occur. If accurate "as built" mapping is not provided to BLM, conflicts may develop in the future with other ROW holders. Due to the surface location being located in Piceance Creek Unit, and the bottom-hole being located in ExxonMobil's Freedom Unit, a ROW will be required for the off-unit pad. This ROW will be serialized as COC75335.

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. Construction activity should take place entirely within the areas authorized in the ROW grants.
2. At least 90 days prior to termination of the right-of-way, the holder shall contact the Authorized Officer to arrange a joint inspection of the right-of-way. 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; re-contouring; top soiling; or seeding. The Authorized Officer must approve the plan in writing prior to the holder's commencement of any termination activities.
3. For the purpose of determining joint maintenance responsibilities, the holder shall make road use plans known to all other authorized users of the common access road. Upon request, the Authorized Officer shall be provided with copies of any maintenance agreement entered into.

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 areas area has been delineated as a Recreation Opportunity Spectrum (ROS) class of Semi-Primitive Motorized (SPM). A SPM physical and social recreation setting is typically characterized by a natural appearing environment with few administrative controls, and low interaction between users however evidence of other users may be present. A SPM recreation experience is characterized by a high probability of isolation from the sights and sounds of humans that offers an environment that offers challenge and risk. Most recreationists in this area are dispersed in nature and the majority of use occurs during fall big game hunting seasons.

Environmental Consequences of the Proposed Action:

Direct and Indirect Effects: The public will lose approximately 10 acres of dispersed recreation potential while the well is in operation. During construction, the public will most likely not recreate in the vicinity of these facilities and will be dispersed elsewhere. If the Proposed Action coincides with big game hunting seasons (August through December) there is a likelihood that a disruption to the quality of the hunting experience sought by those recreationists will occur. Additionally, with the introduction of new well pads and roads, an increase in heavy truck traffic from project activities could be expected in the area, increasing the likihood of human interactions, the sights and sounds associated with the human environment and a less naturally appearing environment.

Cumulative Effects: Combined with other ongoing energy development projects in the vicinity, the Proposed Action will cumulatively contribute to an increasingly modified

environment, higher interactions between various public land users and increasing administrative controls. This will likely change the recreation character of the area from a SPM environment to a more Roaded Natural (RN) environment.

Environmental Consequences of the No Action Alternative:

Direct and Indirect Effects: As the project would not occur, no impacts to recreation would occur.

Cumulative Effects: None.

Mitigation: None.

ACCESS AND TRANSPORTATION

Affected Environment: Access to the project site is gained via County Road 5 (Piceance Creek Rd) to BLM Road 1265 (McKee Gulch Rd). From here it is approximately 3 miles to a point where BLM Road 1265 intersects with an unnamed and unnumbered BLM road. From this point it is approximately 2.1 miles to the point at which the access road for the Proposed Action begins. County Road 5 is paved while the other roads are natural surfaced. Users of these roads include local ranchers, energy development workers and dispersed recreationists.

Environmental Consequences of the Proposed Action:

Direct and Indirect Effects: During construction it is expected that there will be a minor increase in heavy truck traffic on the above named roads. The project proponent proposes to improve approximately 2.1 miles of the unnamed, unnumbered BLM road providing access to the well pad access road. If BLM Road 1265 or the unnumbered, unnamed BLM roads are wet during construction periods, they may become rutted or slick making them impassable to most public users. Road damage may occur due to rutting and/or erosion. If upgrades to BLM Road 1265 or the unnumbered, unnamed BLM road (pursuant to BLM Manual Section 9113) require that traffic is restricted during construction, this may present measureable impacts to other road users.

Cumulative Effects: Combined with other oil and gas development activities in the area, there may be a temporary, cumulative increase in heavy truck traffic along RBC Road 5 and BLM Road 1265 during construction.

Environmental Consequences of the No Action Alternative:

Direct and Indirect Effects: As there would be no project, no effects are anticipated.

Cumulative Effects: None identified.

Mitigation:

1. BLM Road 1265 and the unnumbered, unnamed BLM road will be maintained by the project proponent during well pad and access road construction to assure public travel can continue in a safe manner. The road should be graded to BLM standards if road

damage occurs due to project construction. The proponent will ensure that roads will remain open to public traffic at all times during construction, with vehicle delays of no longer than 15 minutes at any one time.

AREAS OF CRITICAL ENVIRONMENTAL CONCERN

Affected Environment: The Proposed Action is within 50 meters of the Dudley Bluffs ACEC. This ACEC was designated to protect the federally listed threatened species, Dudley Bluffs bladderpod and Dudley Bluffs twinpod and their associated habitats. See the *Special Status Plant Species* section for an analysis of the affected environment.

Environmental Consequences of the Proposed Action:

Direct and Indirect Effects: See the *Special Status Plant Species* section for an analysis of the direct and indirect effects.

Cumulative Effects: See the *Special Status Plant Species* section for an analysis of the cumulative effects.

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 in the Dudley Bluffs ACEC under the No Action Alternative.

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

Mitigation: None.

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TRIBES, INDIVIDUALS, ORGANIZATIONS, OR AGENCIES CONSULTED: None.

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	2/1/2012
Zoe Miller	Ecologist	Areas of Critical Environmental Concern; Special Status Plant Species; Forest Management	1/27/2012
Michael Selle	Archaeologist	Cultural Resources; Native American Religious Concerns; Paleontological Resources	10/5/2011
Mary Taylor	Rangeland Management Specialist	Invasive, Non-Native Species; Vegetation; Rangeland Management	1/12/2012
Lisa Belmonte	Wildlife Biologist	Migratory Birds; Special Status Animal Species; Terrestrial and Aquatic Wildlife; Wetlands and Riparian Zones	1/31/2012
Chad Schneckenburger	Outdoor Recreation Planner	Wilderness; Visual Resources; Access and Transportation; Recreation,	1/23/2012
Will Hutto	Fuels Specialist	Fire Management	10/11/2011
Paul Daggett	Mining Engineer	Geology and Minerals	1/31/2012
Janet Doll	Realty Specialist	Realty	2/9/2012
Melissa J. Kindall	Range Technician	Wild Horse Management	2/1/2012
Brett Smithers	Natural Resource Specialist	Project Lead – Document Reviewer	2/10/12

ATTACHMENTS:

Attachment 1: PCU-FRU 297-15B1 Surface Use Plan of Operations (SUPO)
Attachment 2: Operator Committed Conditions of Approval (COAs)
Figure 1: Project area map.

Attachment 1

PCU-FRU 297-15B1 Surface Use Plan of Operations (SUPO)

SURFACE USE PLAN
Exxon Mobil Corporation
Freedom Unit 297-15B1

Section 15 T2S, R97W 6TH P.M.
RIO BLANCO COUNTY, COLORADO

a. EXISTING ROADS: Shown on Topographic Map "A",

1. Topographic Map "A" shows the proposed well as staked.

2. Beginning at the city of Rifle Colorado, proceed north on Colorado Highway #13 for approximately 18.8 miles to the junction of Rio Blanco County Road #5. Turn west and proceed approximately 17.8 miles to the junction of Rio Blanco CR #3. Turn north and proceed 4.7 miles to junction of CR 3a. Turn west (left) and proceed approximately 3.4 miles on Rio Blanco County Road #76 to the junction of lease road to PCU 297-11B. Continue past PCU 297-11B on lower standard field road for 1.2 miles to junction of access to PCU T45-14G wellpad. Continue west along pipeline ROW road for 0.9 miles. Turn southwest on two-track trail (along staked route) for 1401' to the proposed FRU 297-15B wellpad.

3. All existing roads in the area of the drill site are shown on Topographic Map "A". Maintenance of county roads used for access to FRU 297-15B will be coordinated with Rio Blanco County Road & Bridge Department. Non-county roads will be maintained to BLM Manual 9113 standards. Maintenance will include grading, watering for compaction/ dust control, ditch maintenance and ROW treatment for noxious weeds. Weed control will be performed by certified applicator and conform to the Pesticide Use Proposals (PUP) filed with BLM.

4. This is an exploration well.

b. NEW or RECONSTRUCTED ACCESS ROADS: Approximately 1,401 feet of new road will be constructed to access the wellpad. In addition, approximately 2.1 miles of existing lease road, beginning at existing wellpad PCU 297-11B, will be improved by surfacing, drainage improvements and installation of turnouts. The location of the new access road is provided on Topo 'B' and shown on the wellpad plan drawings.

1. Road Design Criteria. Access roads have been designed to BLM Manual Section 9113 standards for 'Local Road' classification. The new access road will feature a cleared width of 40' with an 18' wide running surface. Typical access road cross-sections are provided on Drawing PC-08-020 (Page 9). Road will be crowned with 2% cross-slope.

   a. The maximum grade for the access road will not exceed 12 %.

   b. Turnouts (10' x 100' w/ 50' transitional tapers) will be installed at 1000' intervals or will be intervisable, whichever is less. Preliminary turnout locations are shown on Topo 'B' and Figure 'B' of the ISWMP for this wellpad (both attached).

   c. The new access road will primarily follow the crest of a ridge. No significant drainages are crossed by the access road. Wing ditches and ditch relief culverts will be used to provide drainage relief from the uphill road ditch. The approximate location of the culverts and wing ditches is shown on ISWMP Figure 2 (attached).

      Five 24" diameter culverts will also be installed for cross-drainage. The location of these culverts is shown on ISWMP Figures 2.1, 2.2 and 2.3 (attached).

   d. Road will be surfaced to provide 'all-weather' access using 6" compacted road base aggregate. Aggregate for road surfacing will be hauled over existing roads from commercial sources in Rio Blanco County:

i. Connel Gravel Pit - Intersection Highway Rio Blanco Co. 5 & US Co. 64, Rio Blanco Co. (Sec 1, T1N, R97W).

ii. Other sources will be identified via Sundry prior to use.

e. No fence crossings/ cattleguards will be required.

f. The proposed access road with be centerline (offset reference) and slope staked prior to construction.

2. Road Construction & Maintenance. The new access roads will be constructed and maintained to BLM Manual Section 9113 standards for 'Local Road' classification.

a. Available topsoil will be removed from the disturbed area and stored in low profile stockpiles at the ROW limits as shown on the typical cross-section. Following construction of the main wellpad/ production facilities access road, the topsoil will be respread on the disturbed area (ditch and road slopes) and reseeded with an approved seed mixture. ROW reclamation will conform to the description provided in Section 'j' of this document. Sections of the existing two-track trail located outside of the new access road construction area will be scarified and reclaimed with adjacent road ROW.

i. Noxious weed control will be performed using licensed local subcontractor (reference Section J.2 of this document). Pesticide use will conform to applicable Pesticide Use Proposals (PUP) filed with the BLM for the Piceance Field Area.

b. Erosion control for the access road will be as indicated on ISWMP Figure 2 "Approximate Construction Limits & Soil Disturbance Map" attached to this document. Road drainage ditches, wing ditches and culverts will be used to control drainage.

c. No significant cuts/ fills (> 10' height) will be required for access road construction. Road subgrade will be constructed using standard cut/fill and side borrow techniques from within the 40' construction ROW.

c. LOCATION OF EXISTING WELLS

1.	Water Wells:	None.
2.	Abandoned wells:	See Topo 'C'.
3.	Temporarily abandoned wells:	None.
4.	Disposal Wells:	None.
5.	Drilling Wells:	None.
6.	Producing Wells:	See Topo 'C'.
7.	Shut-in Wells:	None.
8.	Injection Well:	None.

9. Monitoring or observation wells: None.

d. LOCATION OF EXISTING AND/OR PROPOSED FACILITIES:

This well will be drilled for reservoir appraisal. Exxon Mobil plans to vent/flare the well for testing as per NTL4A. A pipeline route will be determined when production conditions are established. A Sundry will be sumitted with Facilities description and proposed pipeline routing for BLM approval following initial appraisal operations.

Surface Disturbance (linear facilities):

Purpose	Length	X	Width	= Square Feet	Surface Area Disturbed (43560 ft^2/acre)
Flowline(s)	TBD – Will be submitted in Sundry Notice	X	TBD	TBD	TBD
Road (New)	1401'	X	40'	56,040	1.3
Road (Upgrade) Turnouts/ Culverts	N/A	X	-	-	0.4
				Total Planned Disturbance:	1.7 Acre

e. LOCATION AND TYPE OF WATER SUPPLY.

Fresh water will be trucked from permitted ExxonMobil surface water storage facilities: Love Ranch Fresh Water Storage Pond (Sec 9, T2S, R97W) , B&M Fresh Water Storage Pond (Sec 26, T2S, R97W) and PCU 23-18 Fresh Water Storage Tank (Sec 18, T2S, R96W). Water will be hauled to the location using existing roads as shown on Drawing No. WP297-15B-11-001 (attached). No new roads will be constructed for purpose of water haulage.

Produced water will be used for completion activities. Produced water will be hauled from the produced water handling facilities located at the Love Ranch Evaporation Pond (Sec 9, T2S, R97W) and PCU 35-25 SWD station (Sec 25, T2S, R97W).

Anticipated water sources and volumes are provided on Page 10.

f. CONSTRUCTION MATERIALS:

1. Wellpad sub-grade will be constructed by normal cut and fill methods using in-situ soils. Cut has been balanced to meet fill requirements. No offsite borrow will be required to construct the subgrade. Construction techniques are described in Section 'i' of this document.

2. Gravels used for surfacing material, if required, will be hauled over existing roads from commercial sources in Rio Blanco County:

   Connel Gravel Pit - Intersection Highway Rio Blanco Co. 5 & US Co. 64, Rio Blanco Co. (Sec 1, T1N, R97W).

   Other sources will be identified via Sundry prior to use.

g. METHODS FOR HANDLING WASTE:

Waste materials will be contained and disposed of as follows:

1. Drilling fluids will be contained in lined pits constructed to BLM Goldbook, Onshore Order #1 standards and to meet Colorado Oil and Gas Conservation Commission (COGCC) requirements or steel tanks on the wellpad during drilling operations. The reserve and dry cuttings pit/ trenches will be lined using synthetic liner with thickness of 24 mil. Dimensions of the drilling fluid pits are provided in the table below and shown on the attached Wellpad Grading Plan and Layout drawings.

Description – Pits	Length	Width	Depth
Fresh Water Pit	100'	70'	17'
Reserve Pit	130'	70'	17'

Drill cuttings will be disposed of in the reserve pit or dry cuttings pit/trenches and buried with at least 4' of cover. If needed to dry the cuttings and accelerate the pit closure process, the cuttings may be solidified by mixing a drying agent. Excess pit liner above 'free board' elevation will be removed and disposed as trash (see Section 4 below).

If cuttings have been removed from the reserve pit and relocated for disposal, the reserve pit will be relined (with min 24 mil reinforced liner) before completion operations begin. Cuttings are transferred directly from the reserve pit to the cuttings pit and are not stored directly on the wellpad.

2. In the event that ExxonMobil Corporation has used diesel in the drilling mud system and the drill cuttings/fluids contain greater than 1% diesel net weight, these cuttings will be contained at the site in steel tanks and/or lined pits and transported via tanker truck over existing roads a state approved disposal site. The BLM White River Resource Office (Petroleum Eng Tech – Bill Kraft at 970-878-3873) will be contacted prior to testing the cuttings from our first well so the BLM may witness the testing procedures. Currently disposal sites on our approved list in the area are:

   Ace Oilfield Disposal, Inc. (Vernal, UT)
   RN Industries (Roosevelt, UT)

3. All mud cuttings will meet the requirements of the COGCC before being buried on-site. All cuttings will have all harmful properties of the waste reduced or removed and the mobility of leachate constituents reduced or eliminated.

4. Trash, waste paper, and other garbage will be contained in (closed) metal trash dumpsters on the wellpad site and hauled (by third party contract trucking) to the Rio Blanco County Landfill.

5. Salts that are not used in the drilling fluid will be removed from the location by the supplier. Empty sacks are placed in the trash for disposal to landfill (reference Item 6 above).

6. Sewage from the trailer houses will be disposed of in a manner meeting the Rio Blanco County Regulations, as under the guidance of Colorado Water Quality Control Commission, Department of Public Health and Environment.

   Sewage will normally be stored, on-site, in above ground septic tanks. Contents are periodically hauled to municipal water treatment plants at Meeker and Craig, Colorado for disposal.

7. Chemicals that are not used in the drilling and completion of the well will be removed from the location by the supplier. Used drums are returned to the vendor for reuse.

8. Waste oil are handled by a third party contractor during oil change operations and removed from the wellpad for recycling. Oil filters, oily rags and other hydrocarbon contaminated wastes are stored onsite in 55 gallon waste disposal drums and removed from the wellpad by third party contractor for disposal at a licensed facility. Used glycols are stored in 55 gallon drums for collection by a third party contractor and removed from the wellpad to a licensed disposal/ recycling facility. All drums containing waste oils/ used glycols are stored in a lined/ bermed area (on the wellpad) with 110% (volume) storage capacity.

9. Drilling fluids will be removed by vacuum truck to another active location and/or will be allowed to evaporate in the reserve pit until the pit is dry enough for back filling. Water produced during tests will be disposed of in the reserve pit as per Onshore Order 7. Oil produced during tests will be stored in test tanks until sold, at which time it will be hauled from the site. In the event fluids in the pit do not evaporate in a reasonable time, the fluids will be hauled to a state approved disposal site or will be mechanically evaporated.

10. The reserve pit will be fenced on three sides with a 4-strand barbed, woven wire fence, or portable 'cattle panels' during drilling and on the fourth side after the rig is released. Alternate barrier types may also be used upon approval of the BLM. In order to prevent use by migratory birds, reserve pits that store or are expected to store fluids which may pose a risk to such birds, during completion and after completion activities have ceased, shall be netted. If any other means than netting are used, ExxonMobil will notify BLM prior to beginning completion activities.

11. Water separated during well completion/ testing operations will be transported from the by truck and transported to the Piceance Produced Water Disposal (PWD) system located at the ExxonMobil Black Sulphur separation facility. The PWD system will pressurize the produced water for disposal at permitted water injection wells located in the PCU wellfield area or for reuse in drilling & completion operations.

h. ANCILLARY FACILITIES: No offsite camps, airstrips, etc. will be constructed.

i. WELL SITE LAYOUT NARRATIVE & PLAT:

1. Figure 1 (Sheets 1 - 5) provides the proposed well site layout and earthwork requirements. Overall disturbance limits of the wellpad, including BMP installation, are estimated at 8.0 acres. Disturbance limits area shown on attached ISWMP Figures 2 and 3.

2. All equipment and vehicles will be confined to the access road and pad area outlined in Topographic Maps 'A' and 'B'.

3. Mud pits in the active circulation system will be steel pits. The reserve and fresh water pits will be lined with synthetic liner with thickness of 24 mil.

4 Wellpad Construction:

a. If snow is encountered , the snow will be removed before construction begins or the topsoil is disturbed and placed downhill of the topsoil stockpile location.

b. All available topsoil will be stripped on well locations and access roads, prior to construction, and stockpiled for use in reclamation of the site. Topsoil stockpile will be clearly segregated from any spoil pile and placed in location shown on attached Figure 1 – 'Wellsite Grading Plan'. Topsoil depth at this site is estimated at 4". Topsoil will be temporarily seeded and covered with a wildlife friendly biodegradable erosion control blanket. Additionally, wattles will be installed on the downgradient end of the topsoil pile as indicated on attached ISWMP Figure 3 'Proposed BMP ISWMP Drawing'.

c. Wellpad subgrade will be constructed using cut/ fill methods to achieve the required site profile. Embankments may be layer placed or constructed by side casting/ end dumping. The upper 24" of embankments will be installed in compacted layers to achieve a minimum 95% modified proctor density (ASTM D 1557). Rock, if encountered, will be placed in the lower portions of the embankment. No offsite borrow will be required for subgrade construction at this site. Excess cut will be stockpiled in areas shown on attached Figure 1 – 'Wellsite Grading Plan'. Cut/ fill slopes will be constructed to achieve stable angles of 1h:1v (cut) and 1.5h:1v (fill).

d. Aggregate surfacing (road base material) will be hauled, placed, and compacted to achieve necessary thickness to provide 'all weather' surface. Aggregate will be obtained from commercial sources in Rio Blanco County::

Connel Gravel Pit - Intersection Highway Rio Blanco Co. 5 & US Co. 64, Rio Blanco Co. (Sec 1, T1N, R97W).

5. BMP's associated with stormwater management / erosion control will be applied to the site during construction & drilling/ completion operations. Wattles will be used for perimeter runoff control around the wellpad and stockpiles. A double row of wattles will be used along the southwest and northwest corners of the wellpad. A small temporary drainage swale will be used to divert water from the topsoil pile area to a culvert beneath the proposed access road. The culvert will have riprap placed at both the inlet and outlet. A portion of the ditch is located within the wellpad construction limits while the majority of the ditch runs along the proposed access road – no offsite dikes or ditches are required to control runoff to/ from the wellpad. Following construction, the need for temporary stabilization measures for cut/ fill slopes will be evaluated based upon rock content and degree of slope. In areas of rock content > 50%, no erosion control measures on slopes

will be implemented and primary BMP will be wattles at the toe of the fill slope. Where < 50% rock content, surface roughening and erosion control blankets will be used to stabilize the fill slopes and a perimeter BMP will be installed at the toe of the slope. If field conditions do not allow for effective surface roughening or installation of erosion control blankets, hydromulching may be used. If hydromulching is used, the seed will be sprayed at double the drill seeding rate followed by application of hydromulch. Location & type of BMP's are provided on attached Figure 3 ' Proposed BMPs ISWMP Drawing'.

j. PLANS FOR SURFACE RECLAMATION:

1. Upon completion of the drilling & well completion operations and disposal of trash/ debris as described above, pits will be backfilled and recontoured as soon as practical after they have dried. Drill cuttings will be disposed of in the reserve pit and/ or the dry cuttings pits/ trenches. Cuttings will be buried with at least 4' of cover. Excess pit liner above 'free board' elevation will be removed and disposed as trash (See Section 4 below).

   If cuttings have been removed from the reserve pit and relocated for disposal, the reserve pit will be re-lined with a 24 mil (min thickness) reinforced liner prior to completion operations. Cuttings are transferred directly from the reserve pit to the cuttings pit and are not stored on the wellpad.

2. Plans for production of this site will be determined following drilling, completion and testing of the well. A Sundry Notice will be filed with the BLM with specific proposals describing production facilities, flowlines and 'interim' reclamation plans for areas not required for production. As per Onshore Order #1, earthwork for interim reclamation will be completed within 6 months of well completion (weather permitting). In event that the well is unsuccessful, full site reclamation/ abandonment will occur during first construction season following well P&A.

   a. Upon final abandonment of the well, ExxonMobil will return all remaining disturbed areas to approximate original contour and rehabilitate the road and location to a satisfactorily revegetated, safe and stable condition per BLM specifications. If final reclamation requires disturbance > 1 acre, stormwater permit coverage under the State's stormwater program will be reopened.

      i. Topsoil will be removed from remaining sideslope and temporarily regraded areas (interim reclamation) and stockpiled for redistribution on final graded areas.

      ii. Natural drainage patterns will be restored and stabilized by application of BMP's per approved SWMP for this site. These BMP's include surfacing roughening, permanent seeding and may include use of erosion control blankets following regrading operations. Storm runoff from the regraded areas will continue to be controlled using wattles and other appropriate BMP's until stabilization of the reclaimed area has been achieved.

      iii. Following topsoil placement, the seedbed will be prepared by disking or ripping. The area will be seeded with the approved BLM seed mixture for 'Pinion Juniper Woodlands' (Seed Mixture #3). Seed will be certified and free of noxious weeds. Seed certification tags will be submitted to the area manager. Seed will be drilled 'on contour' to a depth no greater than ½". In areas too steep to operate the seed drill, seed will be broadcast at double the seeding rate and harrowed into the soil. Alternatively, hydromulching may be

used in these areas. If hydromulching is used, the seed will be applied first at double the seeding rate prior to hydomulch application. No soil treatments are planned for this site. All slopes 3(h):1(v) or steeper will be covered with wildlife-friendly biodegradable fabrics (such as, but not limited to, jute blankets, Curlex, etc.). Wattles, used along the access road ROW during construction, will be maintained until successful vegetation has been established in the disturbed area as indicated on ISWMP Figure 2 (Attached).

iv. Following seeding and placement of biodegrable fabrics (as required), woody debris cleared during initial construction will be pulled back over the recontoured/ partially reshaped areas to act as flow deflectors and sediment traps. Available woody debris will be evenly distributed so as not to account for more than 20% of total ground cover (or 3 – 5 tons/ acre).

v. Livestock will be excluded from the final reclaimed wellpad areas by installation of a four-strand BLM Type-D barbed wire fence with braced wooden corners, unless otherwise instructed by the BLM. The fences, cattleguards and gates (all built to BLM specifications per BLM Manual H-1741-1) will be installed, maintained, and removed by the operator upon approval by the WRFO BLM.

b. Rehabilitation operations (both interim & final) will start in a timely manner following the completion of operations, per Onshore Order #1. Site specific BMP's will be applied as described above. Additional reclamation efforts will be undertaken if, after the first growing season, there are no positive indicators of successful establishment of seeded species (ie germination). Reclamation efforts will continue so as to ensure a sufficient vegetative ground cover from reclaimed plant species within (3) three growing seasons after the application of seed. At a minimum twice per year, once being in the peak growing season for positive weed identification; the access road and wellpad will be monitored for noxious and invasive species as well as seeding establishment and persistence. Weeds to be treated include houndstongue, black henbane mullein, spotted/ Russian knapweed, leafy spurge and toadflax. Applications will be performed by certified pesticide applicator and conform to approved BLM Pesticide Use Proposals (PUP) specific to the Piceance Creek field area.

k. SURFACE OWNERSHIP

1. Surface and minerals ownership at the wellpad and access road is the Bureau of Land Management (BLM). Agency Address:

   Bureau of Land Management, White River Field Office, 220 E Market St., Meeker Co. 81641. Telephone: 970-878-3800.

l. OTHER INFORMATION

1. The primary soil types found at the well pad and access road is:

   A Rentsac Channery Loam (soil map unit #73): This shallow, well-drained soil is on ridges, foothills, and side slopes. This soil is typically found on 5 to 50 percent slopes. This soil is formed in residuum derived predominantly from calcareous sandstone. Areas are elongated and are 200 to 5,000 acres. The soil is classified as HSG D which indicates a very slow infiltration rate and a high runoff potential.

Typically, the surface layer is grayish-brown channery loam about 5 inches thick. The next layer is very channery loam about 4 inches thick. The underlying material is extremely flaggy light loam 7 inches thick. Hard sandstone is usually located at a depth of 16 inches, but the depth may range from 10 to 20 inches. Permeability is moderately rapid and available water capacity is very low. Additionally, runoff is rapid and the hazard of water erosion is moderate to very high. The erosion factor K is 0.20 which represents a moderate susceptibility to sheet and rill erosion. The off-road and off-trail erosion hazard is moderate and the road and trail erosion hazard is severe.

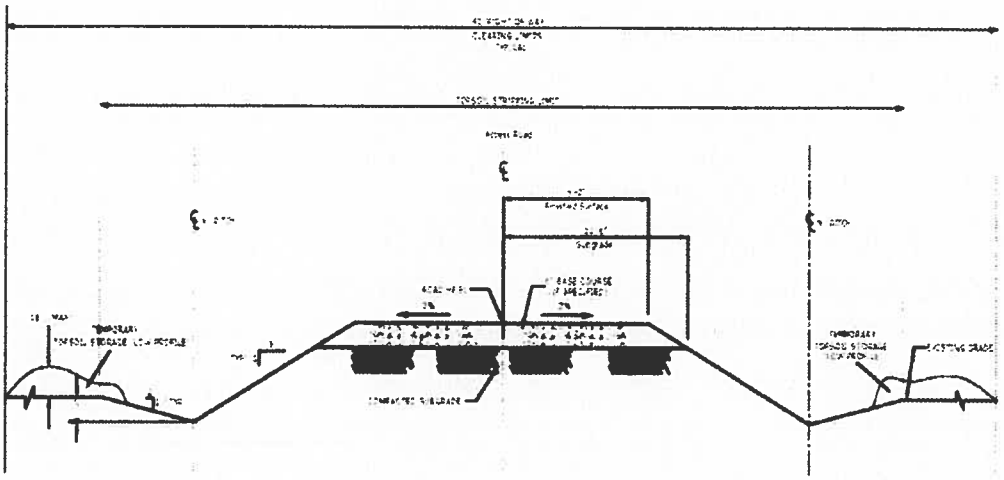
Fragile soils, defined by the BLM as saline soils occurring on slopes greater than 35 percent, are not indicated around the well pad.

The plant community is comprised of sub-mature and mature Pinion-juniper, shrubs (serviceberry, Mountain Mahogany and Wyoming big-sagebrush) and grasses (junegrass, wheatgrass, elk sedge, needle and thread). Photos of the proposed wellpad / access road area are attached.

2. An archaeological investigation will be conducted and report prepared for the proposed access road and well site. Information will be submitted to the BLM.
3. The onsite for this pad was conducted 5/04/2011 The well site name at the time of the onsite was FRU 297-15B.
4. The proposed well pad is located near the crest of a ridge. Drainage flows west/ southwest to an unnamed intermittent drainage which is a tributary to Piceance Creek (½ mile southwest).
5. Total surface maximum surface disturbance is estimated at 9.9 acres including the wellpad, access road and installation of storm water management BMP's. Maximum disturbed area is indicated on ISWMP Figure 2 (attached).
6. Attached is a list of Operator Committed Conditions of Approval for ExxonMobil's Piceance APDs.

SURFACE USE PLAN
Exxon Mobil Corporation
Freedom Unit 297-15B1

Section 15 T2S, R97W 6TH P.M.
RIO BLANCO COUNTY, COLORADO



TYPICAL SECTION ACCESS ROAD

NOTES:

1. See BLM "GOLD Book" for typical "embankment" and "sidehill" section requirements.
2. Road maximum top width 18' unless otherwise noted.
3. Clear all areas within Right Of Way.
4. Grubbing/Stripping shall be limited to the area shown
5. Topsoil stripping depth shall be an average of 4"
6. Material and compaction of road base shall be in accordance with project specifications.
7. Use excavated ditch material to shape subgrade.

REV	DATE	REVISION DESCRIPTION	ENG	DRAWN	CHECKED	APPROVED
2	05/19/2011	Moved ROW Width		SB	SB	WEH
1	05/16/2011	Preliminary		SB	SB	WEH

Typical Wellpad Access Road
Cross - Section
Piceance Development Project

EXXONMOBIL

Drawn by: SB | Checked by: SB
Date: April 25, 2011 | Scale: N.T.S.
Drg No. PC-08-020

SURFACE USE PLAN
Exxon Mobil Corporation
Freedom Unit 297-15B1

Section 15 T2S, R97W 6TH P.M.
RIO BLANCO COUNTY, COLORADO

Water Source & Delivery Information (Per BLM Onshore Order #1)

Water Use Operation	Volume per Well (Bbls –Est)	Volume Per Wellpad (Bbls -Est)	Water Type	Water Delivery Method	Water Source	Permit Number	Comments
Construction	N/A	17,000	Fresh	Truck	ExxonMobil B&M and Love Ranch Fresh Water Reservoirs	Appropriation Number 98CW259	See Haul Route Map (Attached)
Dust Abatement	N/A	8,000	Fresh	Truck	ExxonMobil B&M and Love Ranch Fresh Water Reservoirs	Appropriation Number 98CW259	See Haul Route Map (Attached)
Drilling	34,000	34,000	Fresh	Truck	ExxonMobil B&M and Love Ranch Fresh Water Reservoirs	Appropriation Number 98CW259	See Haul Route Map (Attached)
Completion	50,000	50,000	Produced (SWD)	Truck	PCU PWD System (PCU 35-25 SWD) and Love Ranch SWD Evap Pond	N/A	See Haul Route Map (Attached).

SURFACE USE PLAN
Exxon Mobil Corporation
Freedom Unit 297-15B1

Section 15 T2S, R97W 6TH P.M.
RIO BLANCO COUNTY, COLORADO

ATTACHMENTS

TITLE	DESCRIPTION	DATE/ REVISION
Topographic Maps		
Topographic Map 'A'	Access Map	7/19/2011
Topographic Map 'B'	Proposed Access Road	8/01/2011
Topographic Map 'E' (Aerial Base)	Proposed Access Road w/ Aerial Photo	7/19/2011
Topographic Map 'C'	Area Map	8/01/2011
Water Haul Route – Dwg WP297-15B-11-001	Fresh Water Haul Route & Distances to Wellpad	6/22/2011
Wellpad Plans		
Location Layout (Sht 2)	Wellpad Grading Plan	7/18/2011
Cross Sections (Sht 3)	Wellpad Cross-Sections & Quantities	4/25/2011
Typical Rig Layout (Sht 4)	Wellpad Plan View	6/08/2011
Finish Grading Plan (Sht 5)	Wellpad Finish Grade Elevations	6/08/2011
Photos		
Wellpad Photo 1 & 2	North and East View	6/07/2011
Wellpad Photo 3 & 4	South and West View	6/07/2011
Wellpad Photo 5 & 6	Center Stake and Access	6/07/2011
Storm Water Management Exhibits (BMP's)		
ISWMP Figure 2 Includes Figures 2.1 – 2.7	Project Construction Limits & Soil Disturbance Map	8/18/2011
ISWMP Figure 3	Wellpad Proposed BMP Drawing	8/04/2011

Attachment 2

Operator Committed Conditions of Approval (COAs)

OPERATOR COMMITTED CONDITIONS OF
APPROVAL FOR EXXONMOBIL'S PICEANCE APD'S
BLM-Meeker

I. SURFACE USE PLAN

Timing Limitations

1. The operator shall apply proper pre-planning and plan all activities and operations in a manner so as to avoid infringing on any timing limitations; without the need to apply for exceptions to the specified timing limitations. This will not preclude the operator from requesting exceptions.

Pre-Construction Activities and Notification

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

Post-Construction Notifications

1. In an attempt to track interim and final reclamation of federal actions related to the development of federal mineral resources, the operator shall provide the *designated Natural Resource Specialist* with geospatial data in a format compatible with White River Field Office's (WRFO) ESRI ArcGis Geographic Information System (GIS); GIS point and polygon features. These data will be used to accurately locate and identify all geographic as-built (i.e., constructed and design-implemented) features associated with this project and included in the Application for Permit to Drill (APD) or Sundry Notice (SN), as appropriate.
    - These data shall be submitted within 60 days of construction completion. If the operator is unable to submit the required information within the specified time period, the operator shall notify the *designated Natural Resource Specialist* via email or by phone, and provide justification supporting an extension of the required data submission time period.
    - GIS polygon features may include, but are not limited to; full well pad footprints (including all stormwater and design features), construction access roads/widths, existing roads that were upgraded/widths, and pipeline corridors and/or associated pipeline Right-of-Way corridors, if applicable.
    - Acceptable formats are: (1) corrected global positioning (GPS) files with sub-meter accuracy or better; (2) ESRI shapefiles or geodatabases; or, (3) AutoCAD.dwg or .dxf files. If possible, both (2) and (3) should be submitted for each as-built feature. Geospatial data must be submitted in UTM Zone 12N, 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 shall be directed to the WRFO BLM GIS staff at (970) 878-3800.

If the operator is unable to send the data electronically, the operator shall submit the data on compact disk(s) to:

BLM, White River Field Office
Attn: Natural Resource Specialist
220 East Market Street
Meeker, Colorado 81641

Internal and external review of the reporting process and the adequacy of the associated information to meet established goals will be conducted on an on-going bases. New information or changes in the reporting process will be incorporated into the request, as appropriate. Subsequent permit application processing may be dependent upon successful execution of this request, as stated above.

2. If for any reason the location or orientation of the geographic feature associated with the Proposed Action changes, the operator shall submit updated GIS "As-Built" data to *designated Natural Resource Specialist* within 14 business days of the change. This information shall be submitted via Sundry Notice.

Pre & Post-Drilling Notifications

1. The *designated Natural Resource Specialist* will be notified 24 hours prior to well spud (i.e., breaking ground for drilling surface casing) and within 24 hours after the drill rig has moved from the well pad via email or phone.

2. The *designated Natural Resource Specialist* will be notified 24 hours prior to commencing completion operations and within 24 hours after the completion rig has moved from the well pad via email or phone.

Pre-Reclamation Notifications

1. The *designated Natural Resource Specialist* will be notified 24 hours prior to beginning all reclamation activities associated with this project via email or by phone. Reclamation activities may include, but are not limited to, seed bed preparation that requires disturbance of surface soils, seeding, constructing enclosures (e.g., fences) to exclude livestock from reclaimed areas.

Reclamation and Weed Management

1. All seed tags will be submitted to the *designated Natural Resource Specialist* within 14 business days from the time the seeding activities have ended via Sundry Notice. The sundry will include the purpose of the seeding activity (i.e., seeding well pad cut and fill slopes, seeding pipeline corridor, etc.). In addition, the SN will include the well or well pad number associated with the seeding activity, if applicable, the name of the contractor that performed the work, his or her phone number, the method used to apply the seed (e.g., broadcast, hydro-

seeded, drilled), whether the seeding activity represents interim or final reclamation, an estimate of the total acres seeded, an attached map that clearly identifies all disturbed areas that were seeded, and the date the seed was applied.

2. BLM will provide appropriate seed mix and application timing specifications.

Archeology and Paleontology

1. The operator is responsible for informing all persons who are associated with the project operations that they will be subject to prosecution for knowingly disturbing historic or archaeological sites, or for collecting artifacts. If historic or archaeological materials are uncovered during any project or construction activities, the operator is to immediately stop activities in the immediate area of the find that might further disturb such materials, and immediately contact the authorized officer (AO). Within five working days the AO will inform the operator as to:
   - whether the materials appear eligible for the National Register of Historic Places
   - the mitigation measures the operator will likely have to undertake before the site can be used (assuming in situ preservation is not necessary)
   - a timeframe for the AO to complete an expedited review under 36 CFR 800-11 to confirm, through the State Historic Preservation Officer, that the findings of the AO are correct and that mitigation is appropriate.

   If the operator wishes, at any time, to relocate activities to avoid the expense of mitigation and/or the delays associated with this process, the AO will assume responsibility for whatever recordation and stabilization of the exposed materials may be required. Otherwise, the operator will be responsible for mitigation cost. The AO will provide technical and procedural guidelines for the conduct of mitigation. Upon verification from the AO that the required mitigation has been completed, the operator will then be allowed to resume construction.

2. Pursuant to 43 CFR 10.4(g) the holder of this authorization must notify the AO, by telephone, with written confirmation, immediately upon the discovery of human remains, funerary items, sacred objects, or objects of cultural patrimony. Further, pursuant to 43 CFR 10.4(c) and (d), you must stop activities in the vicinity of the discovery and protect it for 30 days or until notified to proceed by the authorized officer.

3. The operator is responsible for informing all persons who are associated with the project operations that they will be subject to prosecution for knowingly disturbing paleontological sites, or for collecting fossils. If fossil materials are uncovered during any project or construction activities, the operator is to immediately stop activities in the immediate area of the find that might further disturb such materials, and immediately contact the authorized officer (AO). Within five working days the AO will inform the operator as to:

- whether the materials appear to be of noteworthy scientific interest

- the mitigation measures the operator will likely have to undertake before the site can be used (assuming in situ preservation is not feasible)

  If the operator wishes, at any time, to relocate activities to avoid the expense of mitigation and/or the delays associated with this process, the AO will assume responsibility for whatever recordation and stabilization of the exposed materials may be required. Otherwise, the operator will be responsible for mitigation cost. The AO will provide technical and procedural guidelines for the conduct of mitigation. Upon verification from the AO that the required mitigation has been completed, the operator will then be allowed to resume construction.

4. If it becomes necessary to excavate into the underlying rock formation for any reason a paleontological monitor shall be present before and during all such excavations.

Information Sharing & Reclamation Monitoring

1. The Reclamation Status report will be submitted annually for all actions that require disturbance of surface soils on BLM-administered lands as a result of the Proposed Action. Actions may include, but are not limited to, well pad and road construction, construction of ancillary facilities, or power line and pipeline construction. The Reclamation Status Report will be submitted by September 30th of each calendar year, and will include the well number, API number, legal description, UTM coordinates (using the NAD83 datum, Zone 13N coordinate system), project description (e.g., well pad, pipeline, etc.), reclamation status (e.g., Interim or Final), whether the well pad or pipeline has been re-vegetated and/or re-contoured, percent of the disturbed area that has been reclaimed, method used to estimate percent area reclaimed (e.g., qualitative or quantitative), technique used to estimate percent area reclaimed (e.g., ocular, line-intercept, etc.), date seeded, photos of the reclaimed site, estimate of acres seeded, seeding method (e.g., broadcast, drilled, hydro seeded, etc.), and contact information for the person(s) responsible for developing the report. The report will be accompanied with maps and GID data showing each discrete point (i.e., well pad), polygon (i.e. area where seed was applied for interim reclamation or area reclaimed for final reclamation), or polyline (i.e., pipeline) feature that was included in the report. Geospatial data shall be submitted: for each completed activity electronically to the designated BLM staff person responsible for the initial request and in accordance with WRFO geospatial data submittal standards (available from WRFO GID Staff, or no the WRFO website). Internal and external review of the WRFO Reclamation Status Report, and the process used to acquire the necessary information will be conducted annually, and new information or changes in the reporting process will be incorporated into the report.

2. The operator will be required to meet with the WRFO reclamation staff in March or April of each calendar year and present a comprehensive work plan.

The purpose of the plan is to provide information pertaining to reclamation activities that are expected to occur during the current growing season. Operators shall also provide a map that shows all reclamation sites where some form of reclamation activity is expected to occur during the current growing season.

Resource Specific Mitigation

Soil, Water, Air

1. All access roads will be treated with water and/or a chemical dust suppressant during construction and drilling activities so that there is not a visible dust trail behind vehicles. All vehicles will abide by company or public speed restrictions during all activities. If water is used as a dust suppressant, there should be no traces of oil or solvents in the water and it should be properly permitted for this use by the State of Colorado. Only water needed for abating dust should be applied.

2. All construction and drilling activity shall cease when soils or road surfaces become saturated to a depth of three inches unless there are safety concerns or if activities are otherwise approved by the Authorized Officer (AO).

3. In order to protect rangeland health standards for soils, erosion features such as riling, 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 AO and submitting a plan to assure successful soil stabilization with BMP's to address erosion problems.

4. All leases and/or operators shall comply with all federal, state and/or local laws, rules, and regulations, including 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.

5. Through all phases of oil and gas exploration, development and production, all lessees and/or operators 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. When drilling to set the surface casing, drilling fluid will be composed only of fresh water, bentonite and/or a benign lost circulation material only – **that is a lost circulation material that does not pose a risk of harm to human health or the environment**, (i.e. cedar bark, shredded cane stalks, mineral fiber and hair, mica flakes, ground and sized limestone or marble, wood, nut hulls, corncobs or cotton hulls).

7. Locate culverts or drainage dips 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 road surfaces. Install culverts with adequate armoring of inlet and outlet. Patrol areas susceptible to road or watershed damage during periods of high runoff.

8. Keep road inlet and outlet ditches, catchbasins, and culverts free of obstructions, particularly before a during spring run-off. Routine machine-cleaning of ditches should be kept to a minimum during wet weather. Leave the disturbed area in a condition that provides drainage with no additional maintenance.

9. Culverts and waterbars should be installed according to BLM Manual 9113 standards and sized for the 10-year storm event with no static head and to pass a 25-year event without failing.

10. During dry and dusty conditions the applicant will use an approved dust suppressant to mitigate the fugitive dust that would reduce visibility on the access roads to the well pads. The current condition of the BLM roads is the standard and the applicant will regularly maintain the BLM roads utilized as access to meet or exceed their current condition to allow for safe public use.

Hazardous Materials

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

2. ExxonMobil shall submit an updated Spill Prevention, Control, and Countermeasure (SPCC) Plan to the BLM-no later than April 30, 2010. A hard copy of the SPCC plan shall be submitted electronically on Compact Disc (CD) to the WRFO *Hazardous Materials Coordinator*

   BLM, White River Field Office
   220 East Market Street
   Meeker, Colorado 81641
   Attn: Hazardous Materials Coordinator

   ExxonMobil shall additionally submit a revised SPCC plan, in the same format, to the BLM no later than April 30th each year thereafter.

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 Bureau of Land Management's White River Field Office.

4. 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.

5. As a reasonable and prudent operator in the oil and gas industry, acting in good faith, and regardless of fault, you will comply with the reporting requirements of Notice to Lessee's-No.3A and, regardless of a substance's status as exempt or non-exempt and regardless of fault, report all emissions or releases that may pose a risk of harm to human health or the environment to the Bureau of Land Management's White River Field Office at (970) 878-3800.

6. As a reasonable and prudent operator in the oil and gas industry, acting in good faith, and regardless of fault, you 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 poses a risk of harm to human health or the environment, regardless of the substance's status as exempt or non-exempt. Where the lessee/operator 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 Bureau of Land Management's White River Field Office may take measures to clean-up and test air, water (surface and/or ground) and soils at the lessee/operators expense. Such action will not relieve the lessee/operator of any liability or responsibility.

7. With the acceptance of this authorization, the commencement of operations, or the running of thirty calendar days from its issuance, whichever occurs first, and during oil and gas exploration, development and production under this authorization, the operator, and through the operator, its agents, employees, subcontractors, successors and assigns, stipulates and agrees 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.

Migratory Birds and Big Game

1. 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.

2. BLM will specify if Severe Winter Range restrictions apply.

3. BLM will specify if Raptor restrictions apply.

Visual Resource Management

1. BLM will specify paint requirements.

Fire Management

1. When working on lands administered by White River Field Office, notify Craig Interagency Dispatch (970-826-5037) in the event of any fire. The reporting party will inform the dispatch center of the location of the fire, size, status, smoke color, aspect, fuel type and contact information. The reporting party or a representative should remain nearby in order to make contact with incoming fire resources to expedite actions taken towards an appropriate management response. 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 compromised 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 of the extinguisher type and the location of use. Natural ignitions caused by lightning will be managed by federal fire personnel. If a natural ignition occurs within the approved project area, the fire may be initially contained by the applicant only if employee safety is not compromised. The use of heavy equipment for fire suppression is prohibited, unless authorized by the Field Office Manager. Moreover, removal of slash and woody debris associated with the Proposed Action shall follow mitigations as written under Forest Management.

Tree Removal

1. BLM will specify tree removal requirements.

II. NOTICES

A. DRILLING PLAN

1. All operations unless a variance has been granted in writing by the Authorized Officer, must be conducted in accordance with 43 CFR PART 3160 – Onshore Oil and Gas Operations, Onshore Oil and Gas Order No. 1; Approval of Operations on Onshore Federal and Indian Oil Gas Leases; and Onshore Oil and Gas Order No. 2; Drilling Operations. If air or mist drilling is used, operations must be in accordance with Onshore Oil and Gas Order No. 2; Drilling Operations, Part E; Special Drilling Operations.

2. The operator is responsible for the actions of his subcontractors. A copy of the approved APD must be on location during construction, drilling, and

completion operations.

3. Major deviations from the drilling plan require prior approval from the Authorized Officer. The operator shall verbally notify either the petroleum engineer or petroleum engineering technician 24 hours prior to the following operations to provide notice of:
   a) Well spud (Breaking ground for drilling surface casing)
   b) Running and cementing of all casing strings
   c) Pressure testing of BOPE or any casing string
   d) Commencing completion operations

   A written sundry notice of the well spud must be submitted within five (5) business days.

4. All BOPE tests will be done by a tester and not by the rig pumps. The tests will include a low pressure test of 250 psi for five minutes prior to initiating the high pressure tests discussed in Onshore Order No. 2

5. No "new" hardband drill pipe abrasive to casing will be rotated inside the surface casing. Hardband drill pipe will be considered new until it has been run at least once.

6. Drilling muds with chlorides testing in excess of 3,000 ppm or those containing hydrocarbons shall not be used in drilling operations until after the surface casing has been set. When drilling to set the surface casing, drilling fluid will be composed of fresh water, bentonite and/or a benign lost circulation material – that is a **lost circulation material that does not pose a threat to human health or the environment,** i.e. cedar bark, shredded cane stalks, mineral fiber and hair, mica flakes, ground and sized limestone or marble, wood, nut hulls, corncobs or cotton hulls.

7. During surface cementing operations, should cement not be circulated to surface the WRFO shall be verbally notified as soon as reasonable possible. A log acceptable to the WRFO shall be run to determine the top of cement prior to commencing remedial cementing operations. If cement is circulated to surface and subsequently falls back, top job(s) will be performed until cement remains at surface.

8. Due to extensive lost circulation problems that are being encountered in the Piceance Basin during drilling operations form surface to total depth (TD), and given that all usable water zones, potential productive zones, and lost circulation zones shall be protected and/or isolated per Onshore Order #2, the White River Field Office requires sufficient volumes of cement be pumped to meet these requirements. Cement tops behind intermediate and production casing will be verified by an acceptable log to ensure compliance with this order. **We require cement to be run a minimum of 200' above**

the shoe of the previous casing string.

9. Chronological drilling progress reports must be sent directly to the BLM White River Field Office on a daily basis, either electronically or by fax (970-878-3805) to the Petroleum Engineer and/or other designated petroleum engineer technicians until the well is drilled to total depth.

10. All drill cuttings shall be contained in a pit on the pad of the well being drilled, or hauled to an approved disposal site. All pits shall maintain a minimum of two feet of free board at all times.

11. For foam and ultralight cement jobs that are performed in cementing the intermediate or production strings, the operator will wait at least 36 hours for cement to harden before running a specialized log capable of reading pipe cement bond and verifying tops of cement. The White River Field Office shall be verbally notified prior to running such specialized log with enough advance notice to allow a representative from the office to witness. Logs showing pipe cement bond and tops of cement for intermediate and production cement jobs will be forwarded to the BLM.

12. One copy of all charted BOPE tests, logs, core descriptions, core analyses, well-test data, geologic summaries, sample descriptions, and all other surveys or data obtained and compiled during the drilling, workover, and/or completion operations, shall be filed with the completion report, Form 3160-4. The logs should be submitted in a digital format, on a CD. This completion report shall be filed within 30 days of completion of operations and submitted prior to, or along with the first production notice.

13. The WRFO requires the measurement of individual gas, oil (condensate) and water production streams at the wellhead, unless otherwise approved in advance by the BLM. The sales pint for natural gas will be at the wellhead. All meters will be calibrated in place prior to any deliveries. The White River Field Office will be provided with a date and time for the initial meter calibration and all future meter proving and calibration schedules with enough advance notice, 24 hour minimum, to allow a representative from this office to witness. A copy of the meter proving and calibration reports will be submitted to the White River Field Office. Oil (condensate) will be sold from secured tanks on location n, unless otherwise approved in advance by the BLM.

The Bureau of Land Management, White River Office address is:

220 E. Market St.
Meeker, CO 81641
(970) 878-3800

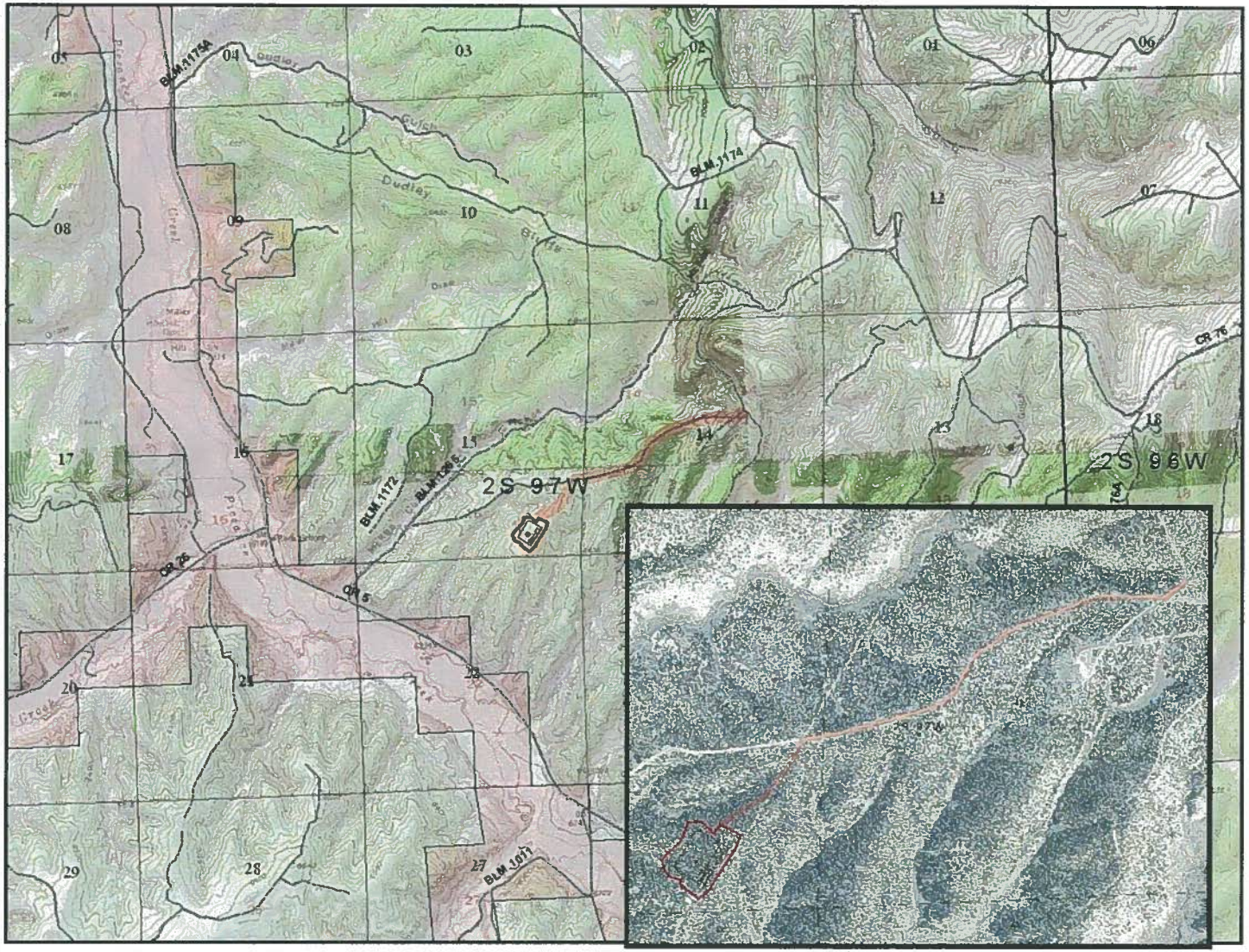


Figure 1. The figure above illustrates the proposed natural gas well pad location for ExxonMobil's proposed PCU-FRU 297-15B appraisal well. The figure also includes the proposed road access to this pad, and both the proposed well pad and access route are symbolized as a red line.

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-110-2011-00187-EA

BACKGROUND
The applicant proposes to construct one well pad, and drill one natural gas appraisal well from this pad. The applicant also proposes to construct an access road to the well pad. The applicant did not provide a proposed pipeline route for this well in the SUP. The surface hole for this well would be drilled from within ExxonMobil's Piceance Creek Unit (PCU); however, the target bottom-hole location would be in their Freedom Unit (FRU) (Figure 1).

FINDING OF NO SIGNFICANT 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. The lease area is relatively undeveloped so any impacts would be considered local, low intensity, and of short-duration.

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 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.

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. With the application of BMPs associated with soil erosion, there is no reasonable likelihood that fugitive sediments would have any measureable influence on the function or condition of Piceance Creek or its riparian resources.

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

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

6. Degree to which the action may establish a precedent for future actions with significant effects or represents a decision in principle about a future consideration.
The Proposed Action neither establishes a precedent for future BLM actions with significant effects nor represents a decision in principle about a future consideration. Similar proposals to drill have been evaluated and approved, so authorization to drill the proposed 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. It is not known whether the Proposed Action is related to other actions with individually insignificant but cumulatively significant impacts.

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. Potential for any impacts to known cultural sites associated with the Propose Action 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. No special status plant species concerns have been identified. Mitigation is provided to reduce impact to special status animal species.

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: Kent T. Walter

Field Manager

DATE SIGNED: 4/10/2012

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: ExxonMobil's Proposed FRU 297-15B1 Well

ENVIRONMENTAL ASSESSMENT NUMBER: DOI-BLM-CO-2011-0187-EA

DECISION

It is my decision to implement the Proposed Action (Alternative A), as mitigated in DOI-BLM-CO-2011-0187-EA, authorizing the construction, drilling, operations, and maintenance of the proposed well and associated access road and pipeline infrastructure.

Mitigation Measures:

1. Exxon-Mobil will limit unnecessary emissions from point or nonpoint air 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. Exxon-Mobil will monitor pits regularly when containing liquid to identify potential leaks. Pits shall be constructed, monitored, and operated to provide for a minimum of two (2) feet of freeboard at all times and maintain fluids in pits. If the operator believes one of the pits has leaked the AO should be notified immediately and all liquids should be removed and properly disposed of off-site. Exxon-Mobil will remove all oil from of reserve pits within 24 hours and dispose of it in a proper disposal facility.

3. Exxon-Mobil shall close the reserve pit within 15 months after the well is drilled. The reserve pits will be allowed to dry through natural evaporation for one four season cycle after the well is drilled. If a pit has not dried by the end of this period, all remaining fluids and/or mud must be removed and disposed of in an approved manner so that the pit may be closed.

4. The BLM recommends BLM seed mix #3 as modified, shown in Table 6 below, for use in seeding both interim and final reclamation. Additional forbs have been added to address concern for special status plant species (see *Special Status Plant Species* for more details).

Table 6. BLM Recommended Seed Mix #3 with forb additions

Rosana	Western Wheatgrass	*Pascopyrum smithii*	3
Whitmar	Bluebunch Wheatgrass	*Pseudoroegneria spicata ssp. inermis*	3.5
Rimrock	Indian Ricegrass	*Achnatherum hymenoides*	3
	Needle and Thread Grass	*Hesperostipa comata ssp. comata*	2.5

Maple Grove	Lewis Flax	*Linum lewisii*	1
	Scarlet Globemallow	*Sphaeralcea coccinea*	0.5
	Rocky Mountain Beeplant	*Cleome serrulata*	1
	Northern Sweetvetch	*Hedysarum boreale*	2
	Sulphur Flower Buckwheat	*Eriogonum umbellatum*	1.5

5. Currently this is a winter use area for livestock grazing so it is not likely that livestock grazing would hinder revegetation efforts. However, if it becomes evident that livestock use is hindering reclamation efforts, the BLM will recommend fencing the pad.

6. The operator must monitor the project area and surrounding area of influence for noxious and invasive weeds through final abandonment. List A and List B weed species will be eradicated. List C weed species will be controlled to prevent them from affecting native plant communities.

7. If the project is not initiated before May 2013 or if any ground disturbing activities associated with the project occur after May 2013, the suitable and marginal habitat in the area 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 with 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.

8. Vegetation removal associated with well pad and road development will take place outside the migratory bird nesting season of May 15 through July 15.

9. No activities (construction, drilling etc.) will be allowed within mule deer severe winter range from December 1 – April 30 to reduce adverse behavioral effects on wintering big game (WRRA ROD TL-08). These timing stipulations may be subject to exception/modification provisions addressed in the WRFO RMP.

10. Prior to construction initiation, nest structures located in the 2010 raptor survey (HaydenWing 2010) will be revisited. If a nest(s) are determined to be active no construction activities will be allowed until July 15 or until young have fledged and left the nest stand (WRRA RMP/ROD TL-01 and 04). No surface occupancy will be allowed within 1/8 – ¼ miles of identified nest sites (WRRA RMP/ROD NSO-02 and 03).

11. Raptor survey report products and survey methodology will follow established guidelines and procedures described in Smithers 2012.

12. All raptor nests (e.g., stick-built structures, nest cavities, eyries, etc.), regardless of their breeding or non-breeding season status, are to be reported to WRFO NRS, Brett Smithers via

phone (970.878.3818) or by E-mail (bsmither@blm.gov; preferred) within 24 hours of the observation.

13. The following information will be provided when reporting raptor nests to BLM:

    - the species observed using the nest, if applicable;
    - UTM coordinates for each nest (recorded in NAD83, Zone 12);
    - the status of the nest (e.g., occupied, unoccupied, unknown)
    - the condition of the nest (e.g., excellent, good, poor, fallen out of tree) (see Smithers 2012)
    - the date the nest was re-visited (for known nests) or first documented (for newly found nests);
    - brief summary describing adult and/or juvenile behavior and number of nestlings observed, if applicable;
    - project name and NEPA document number, if applicable.

14. ExxonMobil 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.

15. If any paleontological resources are discovered as a result of operations under this authorization, ExxonMobil or any of their 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.

16. 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.

17. All permanent (onsite for six months or longer) structures, facilities and equipment placed above ground will be painted Juniper Green form the BLM Standard Environmental Color Chart, CC-001: June 2008.

18. Through all phases of oil and gas exploration, development, and production, all lessees and/or operators and holders of ROWs 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.

19. 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.

    d) 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.
    e) 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 percent 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.
    f) 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.

20. All activities shall be required to comply with 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.

21. Construction activity should take place entirely within the areas authorized in the ROW grants.

22. At least 90 days prior to termination of the right-of-way, the holder shall contact the Authorized Officer to arrange a joint inspection of the right-of-way. 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; re-contouring; top soiling; or seeding. The Authorized Officer must approve the plan in writing prior to the holder's commencement of any termination activities.

23. For the purpose of determining joint maintenance responsibilities, the holder shall make road use plans known to all other authorized users of the common access road. Upon request, the AO shall be provided with copies of any maintenance agreement entered into.

24. BLM Road 1265 and the unnumbered, unnamed BLM road will be maintained by the project proponent during well pad and access road construction to assure public travel can continue in a safe manner. The road should be graded to BLM standards if road damage occurs due to

project construction. The proponent will ensure that roads will remain open to public traffic at all times during construction.

COMPLIANCE WITH LAWS & CONFORMANCE WITH THE LAND USE PLAN

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

ENVIRONMENTAL ANALYSIS AND FINDING OF NO SIGNIFICANT IMPACT

The Proposed Action was analyzed in DOI-BLM-CO-2011-0187-EA and it was found to have no significant impacts, thus an EIS is not required.

PUBLIC INVOLVEMENT

Scoping was the primary mechanism used by the BLM to initially identify external and internal issues related to the Proposed Action. Internal scoping was initiated when the project was presented to the White River Field Office (WRFO) interdisciplinary team on 5/24/2011. External scoping was conducted by posting this project on the White River Field Office's (WRFO's) on-line National Environmental Policy Act (NEPA) register on 6/30/2011. Comments received were limited to those from internal scoping.

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 CRF Part 4.

SIGNATURE OF AUTHORIZED OFFICIAL: Kent E. Walter

Field Manager

DATE SIGNED: 4/10/2012