

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

ENVIRONMENTAL ASSESSMENT

NUMBER: DOI-BLM-CO-110-2012-0069-EA

CASEFILE/PROJECT NUMBER: COC 63329

PROJECT NAME: Laramie Energy Fletcher Gulch FED 22-14-22-01H Well

LEGAL DESCRIPTION: T. 2 N., R. 100 W., Sec. 22, 6th Principle Meridian

APPLICANT: Laramie Energy II, LLC

PURPOSE & NEED FOR THE ACTION:

The purpose of the Proposed Action is to manage the exploration and development of mineral resources on public lands in a manner that avoids, minimizes, reduces, or mitigates potential impacts to other resource values. The need for the action is established by national mineral leasing policies and the regulations that enforce them that recognize the statutory right of lessees to develop Federal mineral resources so long as undue and unnecessary environmental degradation does not occur.

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

SCOPING, PUBLIC INVOLVEMENT, AND ISSUES:

Scoping: Scoping was the primary mechanism used by the BLM to initially identify issues. Internal scoping was initiated when the project was presented to the White River Field Office (WRFO) interdisciplinary team on 6/12/2012. External scoping was conducted by posting this project on the WRFO's on-line National Environmental Policy Act (NEPA) register on 6/20/2012.

DESCRIPTION OF PROPOSED ACTION AND ALTERNATIVES:

Background/Introduction: The onsite for the proposed well was conducted on 3/28/2012. Consequently, the APD and fee were received on 6/1/2012. Raptor and cultural surveys, as well as detailed road designs have been received to fulfill the survey requirements associated with processing the application.

Proposed Action: Laramie Energy II, LLC (LEII) is proposing to drill and complete Fletcher Gulch FED 22-14-22-01H exploratory natural gas well to comply with Section 9 (Drilling to Discovery) of the Fletcher Gulch (Deep) Exploratory Unit Agreement. In addition, Laramie would construct 300 feet of road to access the proposed location. The proposed pipeline corridor would follow the proposed access road and tie into an existing pipeline to the west of the proposed location (see Figure 1 and 2).

To access the proposed well pad, travel south on Hammond Draw road approximately 1.8 miles to a fork in the road. Take the right fork and continue on for approximately 1.60 miles to the proposed location entry. The existing road will need to be upgraded by Laramie II.

The proposed spud date for this well is April 1, 2013. See Appendix A for the proposed Surface Use Plan for the proposed well.

Table 1. Proposed disturbance summary table.

Table 1. Proposed Well Pads, Roads							
Well Pad	Lease	Legal Description T2N, R100W	Surface	Short Term Acres	Long Term Acres	Remarks	
FG Fed. 22-14-22-01H	COC-63329	SESW Sec.22	BLM	4.1	1.0	Includes New Access	
Subtotal			BLM	4.1	1.0		
Well Pad	Gas Line miles ft.		Legal Description T2N, R100W	Surface	Short Term Acres	Long Term Acres	Remarks
FG Fed. 22-14-22-01H	0.06	300	SESW Sec. 22	BLM	0	0	Buried in Access Road Disturbance
Sub-Total	0.06	300			0	0	Part of Road Disturbance
TOTAL			BLM	4.1	1.0	76 % Interim	

C. Gathering Lines

As this well is strictly an exploratory well, Laramie II prefers to limit as much new disturbance as possible until the project becomes viable. This includes using existing roads and any existing pipelines already in place but not in service.

Immediately paralleling the access road are two buried gas lines. The lines were installed as part of Genesis Gas and Oil Fletcher Gulch Shallow Unit. One line is currently in service and is the sales(or discharge) line from the existing compressor facility in Lot 10 Section 3, Twn 1N, Rng. 100W. The second line is a future “gathering” line that is currently not in service. Laramie II intends to temporarily use this line to move the gas from the well to the compressor facility for treatment and compression.

By tying in to this line, approximately 17,300 feet of pipeline ROW will not be required to test the well. At a 50' disturbance width this saves approximately 19.8 acres of disturbance.

Once the well proves capable of production LEII will present a proposal for a buried gathering system for the well and future development.

Design Features: See Appendix A.

No Action Alternative: Under the No Action Alternative, the proposed access road and well pad would not be constructed, and the proposed pipeline would not be installed.

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

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

Date Approved: July 1, 1997

Decision Number/Page: Page 2-5

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

AFFECTED ENVIRONMENT & ENVIRONMENTAL CONSEQUENCES

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

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

Table 2. Past, Present, and Reasonably Foreseeable Actions

Action Description	STATUS		
	Past	Present	Future
Livestock Grazing	X	X	X
Wild Horse Gathers	X	X	X
Recreation	X	X	X
Invasive Weed Inventory and Treatments	X	X	X
Range Improvement Projects : Water Developments Fences & Cattleguards	X	X	X
Wildfire and Emergency Stabilization and Rehabilitation	X	X	X
Oil and Gas Development: Well Pads Access Roads Pipelines Gas Plants Facilities	X	X	X
Power Lines	X	X	X
Seismic	X	X	X
Vegetation Treatments	X	X	X

Affected Resources:

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

Table 3. Resources and Determination of Need for Further Analysis

Determination ¹	Resource	Rationale for Determination
Physical Resources		
PI	Air Quality	See discussion below.
PI	Geology and Minerals	See discussion below.
PI	Soil Resources*	See discussion below.
PI	Surface and Ground Water Quality*	See discussion below.
Biological Resources		
NP	Wetlands and Riparian Zones*	There are no systems that support aquatic wildlife or provide habitat for aquatic species that would have the potential to be influenced by

Determination¹	Resource	Rationale for Determination
		the Proposed Action. The nearest system which supports higher order aquatic vertebrate species is the White River and is separated from the proposed location by approximately 5 miles of ephemeral channel.
PI	Vegetation*	See discussion below.
PI	Invasive, Non-native Species	See discussion below.
PI	Special Status Animal Species*	See discussion below.
PI	Special Status Plant Species*	See discussion below.
PI	Migratory Birds	See discussion below.
NP	Aquatic Wildlife*	There are no systems that support aquatic wildlife or provide habitat for aquatic species that would have the potential to be influenced by the Proposed Action. The nearest system which supports higher order aquatic vertebrate species is the White River and is separated from the proposed location by approximately 5 miles of ephemeral channel.
PI	Terrestrial Wildlife*	See discussion below.
PI	Wild Horses	The project is located within the North Piceance Herd Area, see analysis below.
Heritage Resources and the Human Environment		
PI	Cultural Resources	See discussion below.
PI	Paleontological Resources	See discussion below.
NP	Native American Religious Concerns	No Native American Religious Concerns are known in the area, and none have been noted by Northern Ute Tribal authorities. Should recommended inventories or future consultations with Tribal authorities reveal the existence of such sensitive properties, appropriate mitigation and/or protection measures may be undertaken.
PI	Visual Resources	See discussion below.
PI	Hazardous or Solid Wastes	See discussion below.
PI	Fire Management	See discussion below.
NI	Social and Economic Conditions	There would not be any substantial changes to local social or economic conditions.
NP	Environmental Justice	According to recent Census Bureau statistics (2000), there are no minority or low income populations within the WRFO.
PI	Lands with Wilderness Characteristics	See discussion below.
Resource Uses		
NP	Forest Management	There are no forest management concerns associated with the Proposed Action.

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, stormwater and the improved access roads have been considered in the designs submitted with the surface use plan. Laramie will use CBM water from Genesis or will purchase water from existing sources for drilling operations. It is estimated that 10 acre-ft of water will be used for the completion of one horizontal well, which will likely come from CBM sources. No impacts to floodplains, hydrology or water rights are anticipated.
NI	Realty Authorizations	Existing access road and pipeline are located on unit; therefore, no right-of-way is required. Rights-of-way are present, however, no impacts would be expected.
PI	Recreation	See discussion below.
PI	Access and Transportation	See discussion below.
NP	Prime and Unique Farmlands	There are no Prime and Unique Farmlands within the project area.
Special Designations		
NP	Areas of Critical Environmental Concern	There are no ACECs in the project area.
NP	Wilderness	There are no WSAs in the project area.
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 2012). The Proposed Action is also located more than 10-miles from any special designation airsheds or non-attainment areas. Non-attainment areas are areas designated by 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 north 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) and near the Uinta Basin in Utah. Local air quality parameters including particulates are measured at monitoring sites located at Meeker, Rangely, Dinosaur and Ripple Creek Pass near the Flat Tops Wilderness Area. Ozone data have been collected in Meeker and Rangely since 2010 and at Colorado National Monument in LEII County since 2007. To a limited extent ozone is also measured at Dinosaur National Monument. The closest location for an Interagency Monitoring of Protected Visual Environments (IMPROVE) site is near the Flat Tops Wilderness, northeast of the Project Area. IMPROVE sites measure visibility impairment from air borne particles.

Environmental Consequences of the Proposed Action:

Direct and Indirect Effects: The Proposed Action would result in low and short-term impacts on air quality during construction, drilling, completion and, to a lesser extent, from vehicles and gas processing and compression facilities during the production phase. Increases in the following criteria pollutants would occur due to combustion of fossil fuels during construction activities: carbon monoxide, ozone (secondary pollutant formed photochemically from volatile organic compounds (VOCs) and nitrogen oxides (NO_x)), nitrogen dioxide, and sulfur dioxide.

Three ozone advisories were issued in February and March of 2011 for Rio Blanco County (CAQCC 2011) based on data collected from the Rangely monitoring site showing 1 hour and 8 hour exceedance of NAAQ criteria, but did not lead to a violation of NAAQ standards. Ozone above the 1 hour and 8 hour criteria can cause breathing difficulties and respiratory infections especially in the elderly, the young and those with pre-existing ailments such as asthma. High ozone values have been measure to the west of the project area in the Uinta Basin of Utah, but these areas are not identified on the EPA list of non-attainment areas (EPA 2012)

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

Soil disturbance resulting from construction, heavy equipment, and drill rigs is expected to cause increases in fugitive dust and inhalable particulate matter, specifically particulate matter (PM) 10 microns (µm) or less in diameter (PM₁₀) 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 or dust particles. More than 70 percent of PM₁₀ (coarse particles) is created from windblown dust and soil from roads, fields and construction sites. A smaller percentage of coarse particles comes from automobile and diesel engine exhaust, soot from wood fires, and sulfates and nitrates from combustion sources such as industrial boilers (CAQCC 2011). The Bonanza Power Plant just across the border in Utah is the closest source of these types of industrial emissions. Dust production is the most likely during the construction and drilling phases, especially when conditions are dry and/or windy. Particulate matter is the major contributor to reductions in visibility, due to their ability to scatter or absorb light. Particulate matter can also have human health impacts.

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

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

Cumulative Effects: The Proposed Action is in the two-county area (Rio Blanco and Garfield Counties), principal air pollution sources include emissions from motor vehicles, oil and gas development, coal-fired power plants, coal mines, sand and gravel operations, windblown dust, and wildfires and prescribed burns (CAQCC 2011). Facility emissions in the two-county area are dominated by emissions related to oil and gas exploration, processing, or transportation. Due to these emission sources in the Piceance, White River and in the nearby Uinta Basin, VOCs, nitrogen oxides, and dust (particulate matter) are likely to increase into the future. However, with the exception of ozone, overall air quality conditions in the White River Basin are likely to continue to be in attainment of NAAQ standards due to effective atmospheric dispersion. Ozone levels may increase in localized area and are influenced by emissions in the White River Basin as well as from the nearby Uinta Basin. 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: The following should be added as conditions of approval (COAs):

1. Laramie Energy II, LLC will limit unnecessary emissions from point or nonpoint pollution sources and prevent air quality deterioration from necessary pollution sources in accordance with all applicable state, federal and local air quality law and regulation.
2. Laramie Energy II, LLC will treat all access roads with water and/or a chemical dust suppressant during construction and drilling activities so that there is not a visible dust trail behind vehicles. Any technique other than the use of freshwater as a dust suppressant on BLM lands will require prior written approval from BLM.

GEOLOGY AND MINERALS

Affected Environment: Surficial geology of the well pad location is the tertiary Wasatch Formation (Donnell). During drilling potential water, coal, oil, and gas resources would be encountered from the surface to the targeted zone. Proposed well 22-14-22-01H is located in an area identified in the White River ROD/RMP as having high potential for oil and gas and is outside the area identified as suitable for coal leasing. It is within the Genesis Gas and Oil Company LLC's Fletcher Gulch Federal Oil and Gas Exploratory Unit COC68958X and Laramie Energy II LLC's Fletcher Gulch (DEEP) Federal Oil and Gas Exploratory Unit COC75153X on Federal Oil and Gas Lease COC63329. Fletcher Gulch (Deep) Unit COC75153X is formed for development of the oil and gas resources stratigraphically below the coal bed methane development of the Genesis's unit COC68958. Limited oil and gas exploration has occurred within a one mile radius of the proposed well pad. This consists of two abandoned wells on a single well pad (COGCC). Nearest oil and gas field development occurs approximately 1½ miles south of the well pad in the in the Genesis Fletcher Gulch Unit.

Environmental Consequences of the Proposed Action:

Direct and Indirect Effects: The proposed cementing procedure for the well would isolate the coal zones, geologic formations, and would prevent the migration of water, gas, and oil between formations. Development of this well could deplete the hydrocarbon resources within the drainage acreage associated with reservoir characteristics in the targeted formation. Recovery of the oil and gas resources within the targeted zone would have little to no affect on the future recovery of the overlying coal bed methane resources.

Cumulative Effects: As stated above the Colorado Oil and Gas Conservation Commission (COGCC) database identifies two abandoned oil and gas wells within a one mile radius of the proposed well pad. An additional 11 to 49 wells could be required for full development of oil and gas resources within this one mile radius based on bottom hole spacing

ranging from 160 acres to 40 acres, respectively. Spacing would be determined by the geologic and drainage characteristics of the targeted zone.

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 98 feet (30 meters) of the proposed surface disturbance and could be impacted by the well pad and access road described in the Proposed Action are shown in Table 4. There are no fragile soils or soils prone to landslides on Federal lands that will be impacted by this project. There are however 6 acres of the BLM road that goes through saline soils on Federal lands, and could be impacted by this project.

Table 4. Soil Classifications within 98 feet (30 meters) of the surface disturbance proposed for the pad and 98 feet (30 meters) meters from the centerline of the access road into the pad.

Soil Classification/ Attributes	Yamac loam	Rentsac-Moyerson-Rock outcrop complex
Slope Class (Percent)	2 to 15	5 to 65
Potentially Impacted (Acres)	6	3
Range Site	Rolling Loam	None
Soil Taxonomy Class	Fine-loamy, mixed Borollic Camborthids	Loamy-skeletal, mixed (calcareous), frigid Lithic Ustic Torriorthents
Eosion Hazard (Roads, Trails)	Severe	Severe
Soil Rutting Hazard	Severe	Slight
Surface Texture	loam	channery loam
Depth to Restrictive Layer (ft)	201	41
Runoff Potential	Medium	Rapid
Depth to Water Table (ft)	201	201
Susceptibility for Soil Degradation	Slightly susceptible	Moderately susceptible

The pad and the constructed access road are mostly within Yamac loam soils, which are deep and well drained on rolling uplands. Soil rutting hazard is severe and these soils are only slightly susceptible to soil degradation after disturbance mostly due to their high productivity. Runoff potential is medium. There is minor disturbance that would occur on slopes adjacent to the pad that have severe erosion hazard and access road that would be an acre.

Both the pad and the access roads are in fairly stable terrain. Pad and access road design as well as stormwater BMPs proposed by Laramie should be adequate to stabilize the site and contain any sediment from construction and operation of the site.

Table 5. Soil Classifications within 25 feet of the surface disturbance proposed for the centerline of the BLM Access road.

Soil Classification	Range Site	Erosion Hazard	Rutting Hazard	Surface Texture	Potentially Impacted (Acres)
Uffens loam, 0 to 5 percent slopes	None	Slight	Severe	loam	6
Rentsac-Moyerson-Rock outcrop complex, 5 to 65 percent slopes	None	Severe	Slight	channery loam	6
Forelle loam, 3 to 8 percent slopes	Rolling Loam	Moderate	Severe	loam	4
Glenton sandy loam, 1 to 6 percent slopes	None	Slight	Moderate	sandy loam	3
Yamac loam, 2 to 15 percent slopes	Rolling Loam	Severe	Severe	loam	1
Cliffdown-Cliffdown variant complex, 5 to 65 percent slopes	Salt desert Breaks	Moderate	Severe	gravelly loam	1
Forelle loam, 3 to 8 percent slopes	Rolling Loam	Moderate	Severe	loam	1

The BLM road improvements would mostly impact loam or sandy loam soils (68%) and the rest is outcrop and complex soils along the sides of the valley (32%). This analysis was done base on 25-feet from the centerline since only drainage improvements will be made to the road and the Proposed Action indicates disturbance for improvement of the road will be within this 50-foot ROW. The road improvements would likely stabilize the soils around the road by providing adequate drainage crossings and other road drainage features such as waterbars. The road design is for 16 feet with turn-outs. The current road is at least 16 feet wide in most places, so additional disturbance is not needed in most locations. Rebuilding the drainage features of the access road will require disturbing/building borrow ditches and building turnouts.

Environmental Consequences of the Proposed Action:

Direct and Indirect Effects: The Proposed Action would directly disturb an estimated 4.1 acres (well pad and new access road construction). However, BMPs and site-specific mitigation should reduce long-term affects due to erosion.

Direct impacts from the construction of the well pad, access road, and improvement of the BLM road would include soil compaction, removal of vegetation, exposure of subsoil, mixing of soil horizons, loss of topsoil productivity, and an increase in the susceptibility of soils to wind and water erosion. Compaction due to construction activities would reduce aeration, permeability and water-holding capacities of soils in some locations. Removal of vegetation exposes soils to erosion from rainfall, wind and surface runoff. Exposure of subsoil and mixing of soil horizons can change the physical characteristics of subsoil and may reduce the productivity of these soils before reclamation is complete. Loss of topsoil productivity can occur during storage due nutrient loss through percolation of precipitation through the soils, physical loss and mixing of less productive soil layers during moving and a loss of structure. An increase in surface runoff

and sedimentation could be expected from impacted soils and these soils are likely to be less resilient to erosion from surface runoff after disturbance.

These direct impacts could result in increased indirect impacts to soils off the construction sites 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 construction sites. However, there is the potential for intense storm events and BMP failures resulting in erosion off the site. Monitoring of areas along the access roads and 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 (Hammond Draw watershed) have been and are likely to continue to be exploratory in nature and would likely occur on average at 1 well pad per square mile. Exploratory wells would include surface disturbance for well pads, pipelines, roads and support facilities. More concentrated development in Yanks and Fletcher Gulch to the west is likely. Extensive development of oil and gas in this immediate area has not been proposed or is foreseeable at this time. Livestock grazing and dispersed recreation occurs on public and private lands in the area and may reduce canopy cover and lead to localized erosion in some reclamation areas. No other impacts other than oil and gas development, livestock and recreation are expected in the Hammond Draw watershed.

In general, soil disturbance in the Proposed Action and other activities are likely to reduce soil productivity and may lead to increased erosion and instability of soils in local areas, but is not likely to be outside the 30 meter buffer around the disturbance analyzed for impacts to soil resources.

Environmental Consequences of the No Action Alternative:

Direct and Indirect Effects: No impacts to soils would occur.

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

Mitigation: The following should be added as conditions of approval (COAs):

1. To assure adequate topsoil is saved for reclamation, a minimum of 6 inches of topsoil will be salvaged from the pad site and stored undisturbed, seeded and covered with erosion fabric or mulch to preserve soil characteristics for interim reclamation.
2. In order to protect rangeland health standards for soils, erosion features such as rilling, gullying, piping and mass wasting on the surface disturbance or adjacent to the surface disturbance as a result of this action will be addressed immediately after

observation by contacting the Authorized Officer (AO) and by submitting a plan to assure successful soil stabilization with BMPs to address erosion problems.

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

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

SURFACE & GROUND WATER QUALITY

Affected Environment: Surface Water: This project is mostly within the Hammond Draw watershed, tributary to the White River. Table 6 describes water segments that may be impacted by this project.

Table 6. Water Quality Classification Table*

Segment	Segment Name	Use Protected	Protected Beneficial Uses			
			Aquatic Life	Recreation	Agriculture	Water Supply
12	Mainstem of White River from Piceance Creek to Douglas Creek	No	Warm 1	Existing Contact Recreation	Yes	Yes
13a	Tributaries to the White River from Piceance Creek to Douglas Creek	Yes	Warm 2	Not Primary Contact Recreation	Yes	No

* 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, 2012

Segment 12 is listed as Warm 1. The warm designation means the classification standards would be protective of aquatic life normally found in waters where the summer weekly average temperatures do frequently exceed 20 °C. The Warm 1 designation means that it has been determined that these waters are capable of sustaining a wide variety of warm water biota. Segment 13a describes tributaries to the White River that are protected for warm water aquatic life (Warm 2). The Warm 2 designation means that it has been determined that these waters are not capable of sustaining a wide variety of warm water biota. These segments are also protected for recreation, agricultural and in the case of the segment 12, water supply.

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 and in the headwaters of stream systems.

Contact springs are common in the area and are often the result of upper bedrock aquifers consisting of fractured sandstones and shales. This is particularly the case along Cathedral Bluffs

to the east of the well pad. Perched groundwater zones occur locally when saturated zones contact differences in permeability and solubility of individual formations. These saturated contact zones occur in the ridges at the head of surface water drainages and along outcrops.

The groundwater systems below the drill pad site are mostly in sedimentary systems. The primary freshwater aquifers in this area will be alluvial aquifers corresponding to the valley bottoms.

Environmental Consequences of the Proposed Action:

Direct and Indirect Effects: Surface Waters: Clearing, grading, and soil stockpiling activities associated with the Proposed Action would alter overland flow and natural infiltration patterns. Potential direct impacts include surface soil compaction caused by construction equipment and vehicles, removal of vegetation and disturbance of surface soils, which would increase rain-splash erosion and reduce the soil's ability to absorb water and increase the volume and rate of surface runoff, which in turn would increase surface erosion. Steep-sloped hillsides adjacent and along the pipeline is the most likely area for this surface erosion to occur. Stormwater measures and best management practices include periodic monitoring of any erosion problems would be essential to avoid erosion and increased sedimentation to surface waters. Therefore, impacts are not expected outside the construction sites.

Surface runoff associated with extreme storm events may increase sediment loads in surface waters down gradient of disturbed areas before reclamation is complete, but this is unlikely with proper construction practices. 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: Potential freshwater zones that are anticipated near the surface in the alluvium. Intermittent casing is planned down to 3,089-ft. The grade of cement used will vary but will be brought up to previously cementing intervals using standard drilling practices and checked to eliminate gaps between cement. Cement protects the well casings from leaking due to deterioration over the life of the well and allows casings to withstand pressure increases during completion and hydrologic fracturing activities.

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

Impacts to groundwater resources could occur due to failure of well integrity, failed cement, surface spills, and/or the loss of drilling, completion and hydraulic fracturing fluids into groundwater. Types of chemical additives used in drilling activities may include acids, hydrocarbons, thickening agents, lubricants, and other additives that are operator and location specific. Concentrations of these additives also vary considerably and are not always known

since different mixtures can be used for different purposes in gas development and even in the same well bore. According to COGCC requirements, all chemicals (greater than 500 pounds) used during drilling, completion, and work-over operations, including hydraulic fracturing treatments will be disclosed in a chemical disclosure form by well site. Also, chemicals and additives used for hydraulic fracturing will be disclosed on the public web site set up for this purpose.

Hydraulic fracturing is designed to change the producing formations' physical properties by increasing the flow of water and gas around the well bore. Hydraulic fracturing may also introduce chemical additives into the producing formations. Chemical additives used in completion activities mostly be pumped back out before production. The production zones are from 6,795 to 11,948 feet below the surface.

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 or above the elevation of the well pad. With proper drilling and completion practices contamination of groundwater resources is unlikely.

Cumulative Effects: Well pads in the general area (Hammond Draw watershed) have been and are likely to continue to be exploratory in nature like this one and would likely occur on average at 1 well pads per square mile. Exploratory and production wells would include surface disturbance for well pads, pipelines, roads and support facilities and be more concentrated in Yanks and Fletcher Gulch to the west. Extensive development of oil and gas in this immediate area has not been proposed or is foreseeable at this time. Livestock grazing and dispersed recreation occurs on public and private lands in the area and may reduce canopy cover and lead to localized erosion in some reclamation areas. No other impacts other than oil and gas development, livestock and recreation are expected in the Hammond Draw watershed.

Environmental Consequences of the No Action Alternative:

Direct and Indirect Effects: Neither ground nor surface water quality would be impacted by the no action alternative.

Cumulative Effects: Impacts would be similar to those described for the action alternative, but would not include the impacts from the Proposed Action.

Mitigation: The following should be added as COAs:

1. To protect surface waters below the project area, keep road inlet and outlet ditches, sediment retention basins, and culverts free of obstructions, particularly before and during spring run-off and summer convective storms. Provide adequate drainage 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.

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

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

VEGETATION

Affected Environment: The proposed well pad and access road would be mostly through a rolling loam range site. The proposed location lies within a wildfire burn scar which burned approximately 570 acres. Vegetation in this site that would be affected by the Proposed Action is primarily Wyoming big sagebrush (*Artemisia tridentata*), junegrass (*Koeleria machrantha*), needle and thread (*Stipa comata*), sandberg bluegrass (*Poa secunda*), western wheatgrass (*Pascopyrum smithii*), Indian ricegrass (*Achnatherum hymenoides*), and beardless wheatgrass (*Pseudoroegneria spicata*). Scattered pinyon (*Pinus edulis*) and Utah juniper (*Juniperus osteosperma*) occur within the project area. There is also a component of cheatgrass (*Bromus tectorum*) throughout the plant community that would readily spread into disturbed areas.

Environmental Consequences of the Proposed Action:

Direct and Indirect Effects: Implementation of the Proposed Action would result in the removal of all vegetation on a total of 4.1 acres initially. After interim reclamation approximately 1.0 acre of disturbance would remain for the life of the pad.

Direct impacts of vegetation removal include short-term loss of vegetation and the modification of plant community structure, species composition, and a short-term reduction of basal and aerial vegetative cover. Removal of vegetation also results in increased soil exposure, short-term loss of wildlife habitat, reduced plant diversity, and loss of livestock forage. Indirect impacts include the increased potential for non-native/noxious plant establishment and introduction, accelerated wind and water erosion, changes in water runoff due to road/facility construction, soil impacts that affect plant growth (soil erosion or siltation), shifts in species composition and/or changes in vegetative density away from desirable conditions, and changes in visual aesthetics. Depending on the site, reestablishment of native shrubs may not begin for more than 20 years. Environmental conditions could prevent initial reseeding efforts from being successful, resulting in an extended recovery period for native plant communities. Successful reclamation of the disturbance area could improve the condition of the associated vegetation community. Long-term, plant community health will depend on livestock use in the area since it is relatively close to water sources. With successful reclamation the project is anticipated to have no measurable effects on vegetative communities.

The applicant has proposed to use the recommended BLM seed mix as identified in Table 9 of the Decision Record for CO-110-2006-200-EA on all disturbed areas. Seed mixes from that

document include native seed mixes from the White River ROD/RMP, they are listed as 2,4, and 7 but actually match seed mixes 1, 3, and 6. These seed mixes have been updated with the WRFO surface reclamation plan.

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

Environmental Consequences of the No Action Alternative:

Direct and Indirect Effects: Denial of the project would result in no impact to vegetation along the proposed access road and pad site.

Cumulative Effects: Denial of the proposed project would have little impact on the cumulative effect of oil and gas development impacts to the vegetative communities in the Hammond Draw/Fletcher Gulch area or in the larger surrounding area as a whole.

Mitigation:

1. In addition to the design features submitted by the applicant in the SUP, the applicant shall use seed that is certified and free of noxious weeds. All seed tags will be submitted to the designated Natural Resource Specialist within 14 calendar days from the time the seeding activities have ended via Sundry Notice (SN). The SN 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 as-built shape-file of the area seeded, an attached map that clearly identifies all disturbed areas that were seeded, and the date the seed was applied.
2. Reclamation success criteria must be consistent with current WRFO reclamation success criteria as outlined below.
 - a. Adequate desirable vegetative groundcover is established on disturbed surfaces to stabilize soils through the operational life of the project.
 - i. Reclamation would be considered successful once attaining 50 percent total vegetative cover. On woodland or shrub sites, this would equate to the capability of those sites in an herbaceous state.
 - ii. The resulting plant community (in a healthy early seral state) must contain at least five desirable plant species, at least one of which must be a forb or shrub, each comprising at least 5 percent relative cover. No one species may exceed 70 percent relative cover in the resulting plant community to ensure that site

- species diversity is achieved. Desirable species include those defined by the range site, seeded in the BLM approved mix, or other desired species found in the surrounding areas (approved by the BLM).
- iii. Cover, composition, and diversity data should be gathered using quantitative methods to measure the six Core Terrestrial Indicators and Methods in BLM Technical Note 440. Approved methods are found in Monitoring Manual for Grassland, Shrubland, and Savanna Ecosystems, Volume I and II: Quick Start. Other data collection methods such as those described in BLM Technical Reference 1730-1 or 1734-4 may be pre-approved by the BLM.
 - b. The vegetation community established on the reclaimed site is capable of persisting on the site without continued intervention (excluding routine weed management) and will allow plant community successional processes to progress toward advanced community states.
 - c. Bare ground does not exceed the range/ecological site description or if not described, bare ground will not exceed that of a representative undisturbed DPC meeting the Colorado Standards for Public Land Health.
 - d. Reclamation success in areas affected by cheatgrass, and/or other invasive species will be qualified based on the condition of the project site (i.e., the relative vegetative cover) prior to disturbance.
3. A Reclamation Status Report will be submitted electronically to the WRFO annually (due January 1st) for the life of the project. The Reclamation Status Report will include:
 - a. Reclamation status (e.g., interim or final)
 - b. Area reclaimed/seeded
 - c. Date seeded
 - d. Seeding method (e.g., broadcast, drilled, etc.)
 - e. Photos of the reclaimed site
 - f. Maps showing each point or polyline (i.e., access route) feature that will be included in the report and a shapefile (ArcMap) of invasive species and treatment locations
 - g. Contact information for the person(s) responsible for developing the report
 4. A Reclamation Vegetation Monitoring Report should accompany the (above) status report every other year until successful reclamation is determined. This report should include (at a minimum) the following components to sufficiently and accurately characterize progress of the vegetative community establishment:
 - a. Vegetative attributes for seeded surfaces. Refer to BLM Core Terrestrial Indicators and Methods (Technical Note 440), preferably, or Technical Reference 1730-1 for guidance regarding quantitatively assessing vegetative species composition and cover. The size of each reclaimed area must be specified as well as the number of transects and points hit along the intercept. Indicators to measure and quantify:
 - i. Bare ground including rock fragment, woody debris, biotic soils (if applicable), and litter estimates
 - ii. Plant cover
 - iii. Vegetation composition
 1. Relative cover of all plant species found in the line-point intercept monitoring
 2. Plant species of management concern

3. Species richness over entire reclaimed area
 - iv. Nonnative invasive plant species
 - v. Vegetation height
 - vi. Proportion of soil surface in large inter canopy gaps
5. Construction equipment shall be cleaned prior to entering public land at a location and in a manner that does not result in further weed spread.
 6. Topsoil stockpiles must be seeded immediately as part of Phase I interim reclamation.
 7. BLM recommends using Seed Mix #2 shown below. Seed rates in the table below are shown for drill seeding rates and should be doubled for broadcast application. Seed should be applied anytime between mid-September and mid-March.

Native Seed Mix 2

Seed Mix	Cultivar	Species	Scientific Name	Application Rate (lbs PLS/acre)
2	Arriba	Western Wheatgrass	<i>Pascopyrum smithii</i>	4
	Rimrock	Indian Ricegrass	<i>Achnatherum hymenoides</i>	3.5
	Whitmar	Bluebunch Wheatgrass	<i>Pseudoroegneria spicata ssp. inermis</i>	4
	Lodorm	Green Needlegrass	<i>Nassella viridula</i>	2.5
	Timp	Northern Sweetvetch	<i>Hedysarum boreale</i>	3
		Sulphur Flower Buckwheat	<i>Eriogonum umbellatum</i>	1.5
	Alternates:			
		Needle and Thread	<i>Hesperostipa comata spp. comata</i>	3
		Scarlet Globemallow	<i>Sphaeralcea coccinea</i>	0.5

8. In order to achieve acceptable revegetation BLM recommends that the entire reclaimed area associated with the pad be temporarily fenced (electric or barbwire fencing) for a minimum of three growing seasons to preclude livestock grazing. Fence construction, maintenance, and removal upon achieving successful reclamation are the responsibility of the project proponent.

Finding on the Public Land Health Standard #3 for Plant and Animal Communities: Upland plant communities in the project area, while somewhat degraded and at-risk due to the presence of cheatgrass throughout the area, currently do meet the Standard and are expected to meet the Standard in the future following project implementation and successful reclamation of disturbed areas as described in the SUP that is incorporated in to the Proposed Action of this document.

INVASIVE, NON-NATIVE SPECIES

Affected Environment: Noxious and invasive weed species known to occur within the project area include: houndstounge, Canada thistle, common mullein, halogeton, and cheatgrass.

Cheatgrass and halogeton are annual, invasive/noxious weed species known to readily establish within disturbed areas such as along roads and in areas of unvegetated earthen disturbance.

Environmental Consequences of the Proposed Action:

Direct and Indirect Effects: The disturbance associated with the Proposed Action could create or exacerbate a noxious weed problem by importing weed seed on vehicles and equipment or by creating suitable conditions in the form of non-vegetated disturbed areas. Cheatgrass occurrences are scattered throughout the overall project area and cheatgrass invasion/dominance is very likely if surfaces are not reclaimed immediately following the disturbance. There is also risk of weedy species expanding out into adjacent plant communities. The applicant has incorporated a noxious and invasive weed management plan in the surface use plan for treatment/control of invasive and non-native species.

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

Environmental Consequences of the No Action Alternative:

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

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

Mitigation:

1. Prior to the season of construction, the operators should submit Pesticide Use Proposals for the use of herbicides appropriate for control/eradication of the known noxious and invasive nonnative species within the project area.
2. The operator will eliminate any noxious plants before seed production has occurred. Application of pesticides and herbicides on public lands will conform to BLM Manual 9015 and Appendix B of the BLM White River RMP, Management of Noxious Weeds (BLM 1997). Eradication should make use of materials and methods approved in advance by the AO. The operator will clean all off-road equipment to remove seed and soil prior to commencing operations on public lands within the project area.

SPECIAL STATUS ANIMAL SPECIES

Affected Environment: There are no threatened or endangered species that are known to inhabit or derive important use from the project area. The only listed species that has potential to be indirectly influenced by the Proposed Action is the Colorado pikeminnow. While the species occurs in the White River below Taylor Draw Dam and Kenney Reservoir (~ 13 valley miles from the project area), the White River and its 100-year floodplain from Rio Blanco Lake to the Utah state line are designated critical habitat for the pikeminnow. The White River in Colorado

does not appear to support spawning activity, young-of-year nurseries, or juvenile concentrations areas for the Colorado pikeminnow. Additionally, while the listed bonytail, humpback chub, and razorback sucker do not occur in the White River, water depletions in the White River adversely affect these species' downstream habitats in the Green River.

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

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

Although the distribution of bats in the WRFO is incompletely understood, recent acoustic surveys in the Piceance Basin and along the lower White River (~ 5 valley miles from the project area) have documented the localized presence of Townsend's big-eared and big free-tailed bats along larger perennial waterways. These bats typically use caves, mines, bridges, and unoccupied buildings for night, nursery, and hibernation roosts, but in western Colorado, single or small groups of bats use rock crevices and tree cavities. Rock outcrops and mature components of Pinyon-juniper which may provide temporary daytime roosts for small numbers of bats are limited in the immediate vicinity of the 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.

The WRFO has about six recent records of goshawk nesting in the Piceance Basin, the nearest being approximately 23 miles from the project area. Based on BLM's experience, goshawks nest at low densities throughout the Basin in mature Pinyon-juniper woodlands above 6,500 ft and Douglas-fir and aspen stands. Goshawks establish breeding territories as early as March and begin nesting by the end of April. Nestlings are normally fledged and independent of the nest stand by mid-August. An influx of migrant goshawks appears to elevate densities in this Resource Area during the winter months.

Brewer's sparrows are common and widely distributed in virtually all big sagebrush, greasewood, saltbush, and mixed brush communities throughout the planning area. These birds are typically one of the most common members of these avian communities and breeding densities generally range between 10-40 pairs per 100 acres. Although most abundant in extensive stands of sagebrush, the birds appear regularly in small (one to two acre) sagebrush parks scattered among area woodlands. Typical of most migratory passerines in this area, nesting activities normally take place between mid-May and mid-July.

The White River corridor, approximately 3 miles from the project area, is the hub for seasonal bald eagle use of the White River valley. Particularly during the late fall and winter months, several dozen bald eagles make regular foraging use of open upland communities along the river and its larger tributaries. These foraging forays from nocturnal roosts along the White River are

dispersed and opportunistic. The nearest known active nest location is approximately 31 miles from 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-feet 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 the Proposed Action would be covered by this agreement and water-use values 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.

Northern goshawk: The nearest known goshawk nest is over 23 miles from the project area and due to the limited amount of suitable habitat involved, the Proposed Action is not expected to have any conceivable influence on northern goshawk breeding activities, nor would it directly involve habitats that support nesting/roosting functions of these species.

Brewer's sparrow: The area under direct influence of the Proposed Action was burned in a fire in 2000. As a result, there are no large expanses of sagebrush communities within the immediate vicinity of the project area. As a result, use of this area by Brewer's sparrow is unlikely. However, access to the project area along BLM road 1038 may indirectly influence an additional 140 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 if activities took place during the migratory bird nesting season (May 15 – July 15). The discussion in the *Migratory Bird* section is also relevant to this species.

Bald eagle: Bald eagle foraging use is dispersed and opportunistic across the entire White River Resource Area. The nearest known active nest/roost location is approximately 31 miles from the project area and the White river is located 3 miles from the White River. Disturbance/activity associated with the Proposed Action is not anticipated to have any conceivable influence on local bald eagle populations.

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

Environmental Consequences of the No Action Alternative:

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

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

Mitigation: 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: There are two special status plant species known to occur in the project area (Table 7). Vegetation surveys were completed in May 2012 did not locate any new populations of special status plant species in the project area. Suitable habitat does exist in the project area, and future proposed disturbance in the project area may require additional plant surveys.

Table 7. Special status plant species known to occur near the project area.

Species	Status	Habitat Description	Potential to Occur in the Proposed Project Area
Dudley Bluffs bladderpod (<i>Physaria congesta</i>)	Federally Threatened	Barren, white shale outcrops of the Green River Formation, sometimes with Uinta Formation soils overlying the shale (6,000-6,700 ft).	Suitable habitat is near the project area. Closest known population is approximately 3 miles to the south east.
Debris milkvetch (<i>Astragalus detritalis</i>)	BLM Sensitive	Alluvial terraces with cobbles in pinyon-juniper and mixed desert shrub habitats (5,400-7,200 ft).	Suitable habitat is known in the area. The closest known population is approximately 3 miles to the south.

Environmental Consequences of the Proposed Action:

Direct and Indirect Effects: There should be no conceivable direct impacts to either of the special status plant species because of the distance of the Proposed Action to the nearest known population. There is always the potential that new special status plant species populations could be found near the project area in the future.

Cumulative Effects: With ground and vegetation disturbance there may be the potential of the increase of a non-native or exotic plant species in the project area. Habitat of the special status plant species is limited to specific soil types and geologic formations and any invasions of non-native species could potentially negatively impact suitable habitat. Construction of the pad and associated access route may also potentially remove pollinator habitat and nesting sites causing indirect impacts to the species.

Environmental Consequences of the No Action Alternative:

Direct and Indirect Effects: There would be no construction and therefore no effects associated with special status plant species.

Cumulative Effects: There would be no construction and therefore no effects associated with special status plant species.

Mitigation:

1. Any future ground disturbance or maintenance activities may have the potential to require special status plant species surveys. If special status plants are found in the future there may be specific mitigation measures applied to reduce impacts to the species.

Finding on the Public Land Health Standard #4 for Special Status Species: The Proposed Action and No-Action Alternative are not expected to affect populations or habitats of plants associated with the Endangered Species Act or BLM sensitive species if mitigation measures are implemented.

MIGRATORY BIRDS

Affected Environment: The proposed well pad and access road are located on the top of a ridgeline in an area that experienced a burn in 2000 and is now dominated by a bunch grass community. The surrounding slopes are broadly encompassed by open-canopied Pinyon-juniper woodlands. These woodland and bunch grass 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 Pinyon-juniper associated species which likely occur in the project area and are considered BCC include juniper titmouse, Cassin's finch, and pinyon jay. The titmouse and finch occur widely in virtually all available woodlands, but occur at relatively low densities. Pinyon jays are loosely colonial nesters and are patchily distributed throughout the WRFO's woodlands. This species is reportedly an aggressive and persistent re-nester. BCC associated with sagebrush shrubland habitats is limited to the BLM-sensitive Brewer's sparrow, which is addressed in the Special Status Animal Species section.

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: Direct and indirect impacts to migratory birds would vary depending on construction timeframes. Construction during the winter months would effectively avoid any direct and indirect 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.

The Proposed Action would result in the direct removal of 4.1 acres of bunch grass communities and indirectly influence an additional 22 acres (areas within 100 meters). With successful reclamation, grassland habitats would return to preconstruction conditions within 2 to 4 years. Sagebrush communities could take up to 30 years. Although the proposed pad lies adjacent to a road, there is relatively little continuous development in the project vicinity. Therefore, activities related to construction, such as increased vehicle traffic along the 3.5 miles of road leading to the pad, may indirectly influence an additional 278 acres (areas within 100 meters) 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 birds have contacted drilling or frac fluids (i.e., stored in reserve pits) during or after completion operations and are suffering mortality in violation of the Migratory Bird Treaty Act. The extent and nature of the problem is not well defined, but is being actively investigated by the federal agencies and the companies. Until the vectors of mortality are better understood, management measures must be conservative and relegated to preventing bird contact with frac and drilling fluids that may pose a problem.

Cumulative Effects: The Proposed Action is not anticipated to add substantially to existing or proposed disturbances. Currently, there is very little oil and gas-related disturbance in or around the project area (nearest planned well is located approximately 1.5 miles away). The long-term, the removal of 4.1 acres of vegetation is not anticipated to have a measureable influence on local bird populations as there is considerable suitable habitat adjacent to the project area. Following interim reclamation, only one acre would remain disturbed for the long-term. Prompt and effective reclamation would promote a healthier, diverse plant community which may potentially benefit local wildlife populations as a whole.

Environmental Consequences of the No Action Alternative:

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

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

Mitigation:

1. Vegetation removal and construction activities associated with well pad, road and pipeline development will take place outside the migratory bird nesting season of May 15 through July 15. Earthwork associated with the Proposed Action will be permitted from July 16 through May 14.
2. Although reserve pits are not planned with this project, in the event that they are built the operator shall prevent use by migratory birds of reserve pits that store or are expected to store fluids which may pose a risk to migratory waterfowl, shorebirds, wading birds and raptors during completion and after completion activities have ceased. Methods may include netting or other alternative methods that effectively prevent use and that meet BLM approval. It will be the responsibility of the operator to notify the BLM of the method that will be used to prevent use two weeks prior to when completion activities are expected to begin. The BLM approved method will be applied within 24 hours after completion.

TERRESTRIAL WILDLIFE

Affected Environment: The vegetation communities that encompass the project area are categorized by Colorado Parks and Wildlife as big game critical winter range. These ranges typically receive heaviest use from October through April.

As the result of a fire in 2000, there is no suitable nesting habitat within the immediate vicinity of the Proposed Action for woodland raptors (accipitrine and buteo species, long-eared and saw-whet owls). Further, the woodlands in the surrounding drainages and along the access to the proposed location constitute poor nesting habitat due to widely spaced trees with an open-canopy, varying in height from 5 to 25 feet in height. Due to a lack of suitable nesting habitat in the vicinity of the proposed pad, access road and pipeline, the Proposed Action would have no potential to directly or indirectly influence nesting raptors.

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

Environmental Consequences of the Proposed Action:

Direct and Indirect Effects: The Proposed Action would remove roughly 4.1 acres of bunch grass communities that provide forage and cover resources for local wildlife populations. Following interim reclamation slightly over one acre would remain disturbed for the life of the project. With successful reclamation, grassland habitats would return to preconstruction conditions within 2 to 4 years. Sagebrush communities could take up to 30 years.

Should construction activities take place during the winter months there would be greater potential to displace big game as both deer and elk tend to congregate in the surrounding lower elevation Pinyon-juniper and grassland/sagebrush habitats during these time frames. Increased vehicle traffic, noise and human activity, particularly during the construction and drilling phase would have the greatest potential to displace local wildlife (contributing to increased energetic demands); however, due to the limited amount of activity in the surrounding area, it is suspected that local big game populations would have adequate forage and cover resources available. Local wildlife would be expected to return to the area once drilling has ceased. Of greater consequence is the fact that the Proposed Action represents a new intrusion in an otherwise undeveloped area, particularly in important big game winter ranges. While development of this one well pad will not likely have substantial influence on local big game populations, future increased and expansive development throughout the area has the potential to negatively impact big game. Full development of the subsurface resource is reasonable but not yet proposed (see also discussion in *Cumulative Impacts of the Proposed Action*).

Cumulative Effects: The Proposed Action in and of itself is not anticipated to contribute substantially to existing or proposed disturbances, nor is expected to have any measureable influence on local wildlife populations. While this would represent an incremental loss in big game winter range, there is extremely limited development in the vicinity of the project area (the nearest planned well is approximately 1.5 miles away). Although unknown at this time, potential for future development is probable. Important big game wintering ranges south of Rangely and throughout the Piceance Basin have, in the past, or are currently experiencing heavy oil and gas-related development. Increased and expansive development in this area would be expected to contribute to reductions in important big game wintering habitat with potential negative consequences for local big game populations.

Environmental Consequences of the No Action Alternative:

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

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

Mitigation:

1. No development activities are allowed within Colorado Parks and Wildlife (CPW) designated big game critical winter range from December 1 to April 30. This applies to all acreage associated with the Proposed Action.

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

WILD HORSES

Affected Environment: Within the WRFO there are three wild horse use areas: Piceance-East Douglas Herd Management Area (PEDHMA), North Piceance Herd Area (NPHA) and the West Douglas Herd Area (WDHA). In accordance with the White River ROD/RMP, and the West Douglas Herd Area Amendment (WDHAA) to the WRRMP, wild horses will be managed in the long term only within the PEDHMA. Wild horses are to be managed within the PEDHMA within the range of 135-235 animals, and all wild horses are to be removed from the NPHA and WDHA. The proposal to remove all wild horses from these two areas is regularly litigated and unresolved at this time.

This project is located between Yanks Gulch and Hammond Draw within the North Piceance Herd Area (NPHA) where wild horses currently utilize the area. Currently BLM estimates the population within this wild horse use area as approximately 20 animals.

Environmental Consequences of the Proposed Action:

Direct and Indirect Effects: There are impacts associated with activity during the development of oil and gas resources. As infrastructure is built, wild horses inhabiting the project area can be temporarily displaced due to the presence of human activity. Generally, wild horses prefer areas within a couple of miles from water sources and cover such as small pockets of pinyon/juniper trees, and also areas with gentle topography. The BLM would expect some wild horses to avoid specific areas during construction due to vehicle traffic, dust, noise, and human presence until the horses acclimate to development activities. There is usually a loss of forage associated with development which may be short or long term (proposed 4.1 acre well pad and a 300 foot pipeline length). Water sources used by wild horses may also be damaged during the development phase. The project area does not intersect with the boundary fence between the PEDHMA and NPHA, therefore there would be no concerns regarding the fencing.

Following successful reclamation of the areas disturbed, lost forage may be replaced or increased for use by grazing animals including the wild horses. Increases in available forage occur when vegetation communities which were previously ungrazeable (such as woodlands) are converted to grazeable rangeland, or where forage production is increased as a result of positive reclamation practices.

Cumulative Effects: Overall, leasing the parcels result in continued energy development activities similar to what has occurred throughout the area over the last 30 plus years. Based on these proposed parcels there would be no significant direct or indirect cumulative impacts on wild horses.

Environmental Consequences of the No Action Alternative:

Direct and Indirect Effects: There would be no impacts to the wild horses from the No Action Alternative.

Cumulative Effects: Cumulative effects are the same as those analyzed in the Proposed Action.

Mitigation:

1. To minimize the incidents of young foals becoming dislocated from their mare or band, crews would be asked to slow or stop when wild horses are encountered, allowing the

- bands to move away at a pace slow enough so that the foal can keep pace and are not separated.
2. Regularly inspect of the open trench for trapped wild horses will be done and if injured animals are found will contact the BLM.
 3. If a cattle guards is installed at fence crossings associated with access roads and/or pipelines will be upgraded to a horse proof cattle guard so that the risk of wild horses being trapped in a cattle guard is reduced.

CULTURAL RESOURCES

Affected Environment: The proposed well pad location has been inventoried at the Class III (100 percent pedestrian) level (Conner and Davenport 2012 compliance dated 6/15/2012). One small, limited prehistoric site was recorded during the inventory and is located more than 70 meters from the proposed location. The site is very limited and not visible from the pad locations.

Environmental Consequences of the Proposed Action:

Direct and Indirect Effects: Provided that all construction activity associated with well development is strictly limited to the pad location and the proposed access corridor, there would be no direct impacts to any known cultural resources. Indirect impacts could occur due to improved access in the area and increased human activity in the area. A potential increased unauthorized collection of artifacts would be the most likely source of loss of archaeological data.

Cumulative Effects: Any unauthorized collection of artifacts that occurs as a result of increased human presence and activity in the area constitutes a long term, irreversible, irretrievable loss of scientific data to the regional archaeological database. Recordation of the site has preserved some data, mostly from the surface but any potential subsurface data has not been identified and recorded at this time.

Environmental Consequences of the No Action Alternative:

Direct and Indirect Effects: There would be no direct impacts to cultural resources under the No Action Alternative. There would be less potential for increased human activity in the area and potentially less unauthorized collection of artifacts. The slow natural process of weathering and erosion would not be accelerated or changed and would continue as it has since the sites occupants abandoned the site.

Cumulative Effects: The slow natural weathering process that has been occurring on the site since the original inhabitants abandoned it would continue as it has during the intervening centuries resulting a a slow alteration or loss of archaeological data to the regional archaeological database, The accelerated loss of data from unauthorized artifact collection would be reduced.

Mitigation:

1. Laramie Energy II, LLC is responsible for informing all persons who are associated with the project that they will be subject to prosecution for knowingly disturbing

archaeological sites or for collecting artifacts.

2. If any archaeological materials are discovered as a result of operations under this authorization, activity in the vicinity of the discovery will cease, and the BLM WRFO Archaeologist will be notified immediately. Work may not resume at that location until approved by the AO. Laramie Energy II, LLC will make every effort to protect the site from further impacts including looting, erosion, or other human or natural damage until BLM determines a treatment approach, and the treatment is completed. Unless previously determined in treatment plans or agreements, BLM will evaluate the cultural resources and, in consultation with the State Historic Preservation Office (SHPO), select the appropriate mitigation option within 48 hours of the discovery. Laramie Energy II, LLC, under guidance of the BLM, will implement the mitigation in a timely manner. The process will be fully documented in reports, site forms, maps, drawings, and photographs. The BLM will forward documentation to the SHPO for review and concurrence.
3. Pursuant to 43 CFR 10.4(g), Laramie Energy II, LLC must notify the AO, by telephone and written confirmation, immediately upon the discovery of human remains, funerary items, sacred objects, or objects of cultural patrimony. Further, pursuant to 43 CFR 10.4(c) and (d), Laramie Energy II, LLC must stop activities in the vicinity of the discovery and protect it for 30 days or until notified to proceed by the AO.

PALEONTOLOGICAL RESOURCES

Affected Environment: The proposed well location is located in a area generally mapped as the Wasatch Formation (Tweto 1979) which the BLM, WRFO has classified as a Potential Fossil Yield Classification number 5 meaning the formation is well known for producing scientifically noteworthy fossil resources including mammals such as Perrisodactyles, tapiroids, primates, insectivores, and amphibians such a turtles, crocodilians and alligators. Fish, plants and invertebrates such as non-marine mollusks are also known to come from the formation (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 to level the well pad, excavate the reserve/cuttings/blooiie pit, install storm water management features or bury the well tie pipeline there is the potential to directly impact scientifically noteworthy fossil resources. Indirect impacts could also occur as there is increased activity in the area due to oil and gas production which could result in unauthorized collect of fossil resources. Smaller, more fragile fossil could also be lost due to crushing or erosion as the surface is disturbed and/or left unreclaimed.

Cumulative Effects: There would be a long term irreversible, irretrievable impact to the regional paleontological database as a result of the action. Monitoring could reduce the impacts to some degree but, due to the very small nature of the resources potentially impacted there is always the potential to loose data. Crushing and erosion are a particular threat to the smaller

fossils resources in the area due to the difficulty of identification in the field and fragility of the resources.

Environmental Consequences of the No Action Alternative:

Direct and Indirect Effects: There would be no new construction related impacts to the regional paleontological database under the No Action Alternative. The slow natural weathering of the stone into a sandy clay soil would continue as it has for centuries causing a slow loss of the smaller and more fragile fossils as they are exposed and washed away during natural erosional processes.

Cumulative Effects: There is a very slow loss of fossil data, particularly among smaller fossils and exposure of larger fossils that will eventually weather and crumble. This is a slow naturally occurring process and does allow some time for interested researchers to recover data.

Mitigation:

1. Laramie Energy II, LLC 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, Laramie Energy II, LLC or any of his agents must stop work immediately at that site, immediately contact the BLM Paleontology Coordinator, and make every effort to protect the site from further impacts, including looting, erosion, or other human or natural damage. Work may not resume at that location until approved by the AO. The BLM or designated paleontologist will evaluate the discovery and take action to protect or remove the resource within 10 working days. Within 10 days, the operator will be allowed to continue construction through the site, or will be given the choice of either (a) following the Paleontology Coordinator's instructions for stabilizing the fossil resource in place and avoiding further disturbance to the fossil resource, or (b) following the Paleontology Coordinator's instructions for mitigating impacts to the fossil resource prior to continuing construction through the project area.
3. Any excavations into the underlying native sedimentary stone must be monitored by a permitted paleontologist. The monitoring paleontologist must be present before the start of excavations that may impact bedrock.

VISUAL RESOURCES

Affected Environment: The Proposed Action is located within a VRM Class III area. The objective of the VRM III classification is to partially retain the existing character of the landscape. The level of change to the characteristic landscape should be moderate. Management activities may attract attention but should not dominate the view of the casual observer. Changes should repeat the basic elements found in the predominant natural features of the characteristic

landscape. Generally, the landscape is primarily covered with sagebrush and juniper, along with mixed stands of mountain shrub species. Natural features of the landscape consist of flat to sloping and undulating terrain, with the occasional sharp line from rocky outcrops. Color tones are typical of the area, generally muted browns and beiges with green in the more heavily vegetated areas. Some existing roads, oil and gas facilities, and utility ROWs have created impacts to the form, line, and color that affect the natural appearance of the landscape.

Environmental Consequences of the Proposed Action:

Direct and Indirect Effects: Implementation of the Proposed Action would cause some visual impacts, primarily through the removal of existing vegetation and the introduction of sharp visual contrasts on the landscape from the linear and vertical disturbances. The degree of impact would depend on the type of vegetation affected. Areas cleared of pinyon/juniper and sagebrush vegetation would cause the most visual impact, and these impacts could persist for years. In areas where the proposed project parallels an existing pipeline or road corridor, the visual impacts would be an incremental increase in already existing effects. Construction of the new access road would be in an area not previously disturbed and would create a linear feature on the landscape due to the contrasting changes in vegetation (removal of vegetation) and color and texture once the topsoil has been exposed and removed. Overall in these instances, the contrast between the surrounding vegetation and the cleared ROW would be very apparent visually. However, soil color contrasts would be eliminated after the access road and pad is reclaimed and revegetated. Combined with painting all above ground facilities Juniper Green, the overall level of change to the characteristic landscape would be low and the objectives of the VRM III classification would be retained.

Cumulative Effects: Combined with other ongoing oil and gas development in the area, the Proposed Action would incrementally contribute to an increasingly industrial appearing landscape.

Environmental Consequences of the No Action Alternative:

Direct and Indirect Effects: As the Proposed Action would not be implemented, no impacts to visual resources would occur.

Cumulative Effects: None have been identified.

Mitigation:

1. Paint all aboveground facilities Juniper Green from the BLM Standards Environmental Color Chart CC-001: June 2008. All above ground facilities will be painted within 6 months of installation.

HAZARDOUS OR SOLID WASTES

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

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

Substances used in the hydraulic fracturing process may be harmful to human health or the environment. However, freshwater-bearing formations and other resources suitable for human use or consumption are isolated from man-made materials used in oil and gas operations through the use and cementing of surface casing, see 43 CFR §3162.5-2(d).

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

Mitigation:

1. As a reasonable and prudent operator/ROW holder acting in good faith, LEII will report all emissions or releases that may pose a risk of harm to human health or the environment, regardless of a substance's status as exempt or nonexempt and regardless of fault, to the BLM WRFO (970) 878-3800.
2. As a reasonable and prudent operator/ROW holder, acting in good faith, LEII will provide for the immediate clean-up and testing of air, water (surface and/or ground), and soils contaminated by the emission or release of any substance that may pose a risk of harm to human health or the environment, regardless of that substance's status as exempt or non-exempt. Where LEII fails, refuses, or neglects to provide for the immediate clean-up and testing of air, water (surface and/or ground), and soils contaminated by the emission or release of any quantity of a substance that poses a risk of harm to human health or the environment, the BLM WRFO may take measures to clean-up and test air, water (surface and/or ground), and soils at the LEII's expense plus an additional 25% as per 43 CFR 3163.1 (a)(4). Such action will not relieve LEII of any liability or responsibility.
3. Where required by law or regulation to develop a plan for the prevention of releases or the recovery of a release of any substance that poses a risk of harm to human health or the environment, provide a current copy of said plan to the BLM WRFO.
4. With the acceptance of this authorization, the commencement of operations under this authorization, or within thirty calendar days from the issuance of this authorization, whichever occurs first, LEII, and through its agents, employees, subcontractors, successors and assigns, stipulate and agree to indemnify, defend and hold harmless the United States Government, its agencies, and employees from all liability associated with the emission or release of substances that pose a risk of harm to human health or the environment.
5. 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, oil, or methanol, shall be stored in appropriate containers and in secondary containment systems sized at least 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.

6. 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.
7. LEII shall comply with all Federal, State and/or local laws, rules, and regulations, including but not limited to Onshore Orders and Notices to Lessees, addressing the emission of and/or the handling, use, and release of any substance that poses a risk of harm to human health or the environment.
8. Through all phases of oil and gas exploration, development, and production, LEII 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 any substance that poses a risk of harm to human health or the environment.

FIRE MANAGEMENT

Affected Environment: The Proposed Action is located within the C-10W Fletcher Fire Management Polygon with a vegetation composition of primarily pinyon juniper woodland, Wyoming big sagebrush, and mountain shrub. The resource management objective is to manage naturally ignited fires throughout this polygon to promote a vegetation mosaic with varying successional stages. Natural fire management objectives are emphasized in order to benefit multiple resource goals when prescriptive parameters allow. The fire regime/condition class for this fire management polygon is currently at a two, or is land considered to have been moderately altered from its historical fire return interval. In the past ten years there have been 2 fires over 10 acres within 2 miles of the proposed project. In 2000, the 572 acre Yanks fire impacted the project site. Since 2000 there have been 13 fires within 2 miles of the proposed project ranging in size from 1/10 acre to 2 acres in size.

Environmental Consequences of the Proposed Action:

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

Cumulative Effects: A continued increase in natural gas drilling within the area may cause difficulties in full implementation of the Northwest Colorado Fire Program Area Fire Management Plan. Only when drilling operations decrease will fire and resource managers allow naturally ignited fire to create a vegetation mosaic representing various plant communities in different successional stages. If the exploratory well goes into production and additional gathering lines are added, as stated in the Proposed Action, the associated construction will further restrict the full implantation of the Fire Management Plan.

Environmental Consequences of the No Action Alternative:

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

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

Mitigation:

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

RANGELAND MANAGEMENT

Affected Environment: The entire proposed project is on public land within the Hammond Draw livestock grazing allotment (#06039). This allotment contains a total of 6,907 acres of

public land. Grazing use within this allotment occurs between 3/1 and 5/23 yearly. The total disturbance on public lands within this allotment would be 4.1 acres. The total permitted livestock use is 215 Animal Unit Months (AUMs). There are six pit reservoirs/small stock ponds in close proximity to the proposed well location (200 meters or less), including one pit reservoir within the proposed well pad boundary.

Environmental Consequences of the Proposed Action:

Direct and Indirect Effects: Until disturbed areas successfully reclaimed there would be a short term loss of less than one AUM in the Hammond Draw allotment. There would be a longer-term forage loss associated with the 1.0 acres of pad surface that would not be reclaimed for the life of the pad. The short-term forage loss within the allotment would be far less than the annual fluctuation in forage production, and is not expected to result in any need for changes in livestock numbers or grazing periods. Reclamation of disturbed areas would likely offset the short-term forage loss on the allotment within two to three years through increased herbaceous production above current production levels.

Damage to the pit reservoir within the boundary of the proposed well pad is not expected to interfere with management of livestock and proper utilization of the rangeland resource as there are three others within 80 meters or less of the affected pond. Some impacts to livestock may occur if construction occurs during the authorized livestock use period, as livestock are displaced due to activity, it is expected that displacement would be short term, livestock would habituate to activity in the area and normal grazing patterns would resume.

Cumulative Effects: Agriculture, road development, and oil and gas development which have the potential to impact rangeland management would continue to occur. The Proposed Action would remove forage temporarily in the Hammond Draw allotment. After project construction has been completed and grass/forb communities have returned the Proposed Action would contribute to a broader grass/forb dominated site that would provide additional forage for livestock in the area. Implementation of the Proposed Action in conjunction with existing and future uses is not expected to impede or affect the proper management of livestock on rangelands within the grazing allotment in which the Proposed Action occurs.

Environmental Consequences of the No Action Alternative:

Direct and Indirect Effects: There would be no direct and/or indirect effects to rangeland management under the No Action Alternative.

Cumulative Effects: Activities associated with agriculture, road development, and oil and gas development would continue to occur in the area, which has the potential to impact rangeland management by removal of forage, impacts to range improvements, etc.

Mitigation:

1. Any range improvement or other livestock handling/distribution facilities that are damaged or destroyed as a direct or indirect result of implementation of the Proposed Action shall be promptly repaired or replaced by the applicant to restore pre-disturbance functionality.

RECREATION

Affected Environment: The proposed project area is located within the White River Extensive Recreation Management Area (ERMA) on BLM lands administered by the WRFO. The WRFO manages the ERMA to provide for unstructured recreation activities, and a diversity of outdoor recreation opportunities, including hunting, dispersed camping, hiking, horseback riding, wildlife viewing, and off-highway vehicle (OHV) use are to be maintained and protected. There are no Special Recreation Management Areas (SRMAs) identified within WRFO lands.

On BLM-administered lands, the Recreation Opportunity Spectrum (ROS) is a classification system and a prescriptive tool for recreation planning and management. ROS classes include primitive (P), semi-primitive non-motorized (SPNM), semi-primitive motorized (SPM), roaded natural (RN), rural (R), and modern urban (MU). The proposed project area falls within an ROS class of SPM. The SPM physical and social recreation setting is typically characterized by a natural appearing environment with few administrative controls and low interaction between users (but evidence of other users may be present). SPM recreational experience is characterized by a high probability of isolation from the sights and sounds of humans within a setting that offers challenge and risk.

Environmental Consequences of the Proposed Action:

Direct and Indirect Effects: During construction of the wellpad and road, the public would temporarily lose some dispersed recreation potential. Traffic, noise, human activity, and dust would temporarily increase and could affect the quality of some users' recreational experiences. Increased contact between recreationists and construction crews, the sights and sounds associated with construction activities, and a less naturally appearing environment near the Proposed Action would be temporary, due to the constant movement of construction crews, dispersed nature of construction activities, and implementation of a reclamation program after construction has been completed. During construction, the public would most likely not recreate near the project and would disperse elsewhere.

Construction activities during big game hunting seasons may temporarily displace wildlife to habitat away from the Proposed Action. Since hunting relies on the presence of game species and hunters generally prefer relatively quiet settings, it is likely that construction activities could disrupt hunting in localized areas within close proximity of active construction. Although construction may temporarily generate disruptions to nearby recreation activities, it is likely that hunters could find relatively undisturbed settings on adjacent public lands. Further discussion of wildlife displacement is discussed in the Terrestrial Wildlife section.

Cumulative Effects: Combined with other ongoing oil and gas development activities, the Proposed Action may incrementally contribute to reduced opportunities for dispersed recreation and increase wildlife displacement.

Environmental Consequences of the No Action Alternative:

Direct and Indirect Effects: Since the Proposed Action would not occur, no effects to recreation are expected.

Cumulative Effects: None have been identified.

Mitigation: None.

ACCESS AND TRANSPORTATION

Affected Environment: Access to the Proposed Action will be achieved via State Highway 64 to BLM Road 1038. Currently BLM Road 1038 is used primarily for oil and gas production, local ranching operations and to a lesser extent, dispersed recreation.

Environmental Consequences of the Proposed Action:

Direct and Indirect Effects: Since existing BLM Road 1038 will be used to access the project site, it is possible that there will be minor, temporary disruptions to the normal flow of traffic along this road. The transport of heavy equipment along this road may also lead to road damage, particularly in wet conditions.

Cumulative Effects: None have been identified.

Environmental Consequences of the No Action Alternative:

Direct and Indirect Effects: Since the Proposed Action would not be implemented, no effects to access and transportation are anticipated.

Cumulative Effects: None have been identified.

Mitigation:

1. The project proponent will ensure that through traffic along BLM Road 1038 remains open and unimpeded at all times.
2. Any damage to existing roads as a result of the Proposed Action will be repaired to a condition that is similar to the original state or better than what existed prior to the commencement of construction.

LANDS WITH WILDERNESS CHARACTERISTICS

Affected Environment: During the development of the White River Field Office Oil and Gas Development Draft Resource Management Plan Amendment (RMPA) and Environmental Impact Assessment (EIS), the BLM completed an initial review of its lands within the field office to determine which, if any, areas possess wilderness characteristics. This review included only BLM lands and did not include existing WSAs. Lands exclusively within existing WSAs were not analyzed; however, lands with potential wilderness characteristics outside or adjacent to WSAs were assessed. Existing designated WSAs would continue to be managed to protect those wilderness characteristics under the BLM's interim management policy until Congress

designates them as wilderness or releases them for other uses. Areas evaluated for wilderness character consisted of roadless areas greater than 5,000 acres or roadless areas less than 5,000 acres adjacent to a WSA. These areas are currently being inventoried to determine if they meet the criteria for being considered a land with wilderness character, which includes areas that exhibit “naturalness” and provide opportunities for solitude and primitive and unconfined types of recreation. All elements of the Proposed Action occur in an area identified as potentially containing wilderness characteristics, Polygon #15. Please refer to the *White River Field Office Oil and Gas Development Draft RMPA/EIS, Section 3.9 and Section 4.9* for a detailed discussion of how polygons potentially containing wilderness character were identified.

Environmental Consequences of the Proposed Action:

Direct and Indirect Effects: The parcel for which the Proposed Action occurs, Polygon #15 (6,574 acres), has not yet been fully inventoried to determine its suitability to be considered a land with wilderness character. Therefore, until such a time that it can be fully inventoried, Polygon #15 is assumed to contain wilderness character. The development of a well pad and associated road is generally not consistent with the criteria for determining an area to contain wilderness character and the implementation of the Proposed Action, as is, could jeopardize this determination in the future. However, because the Proposed Action occurs on the edge of Polygon #15, the total acreage associated with the action (4.1 acres) could be removed from Polygon #15 without jeopardizing its suitability for future determination.

Cumulative Effects: None have been identified.

Environmental Consequences of the No Action Alternative:

Direct and Indirect Effects: As the Proposed Action would not occur, no impacts to lands with wilderness characteristics would occur.

Cumulative Effects: None have been identified.

Mitigation: None.

REFERENCES CITED:

Armstrong, Harley J., and David G. Wolny

1989 Paleontological Resources of Northwest Colorado: A Regional Analysis. Museum of Western Colorado, Grand Junction, Colorado.

Colorado Dept. of Public Health and Environment Air Quality Control Commission (CAQCC).

2011 Colorado Air Quality Control Commission Report to the Public 2010-2011, Colorado Dept. of Public Health and Environment, Denver, CO.

Colorado Dept. of Public Health and Environment Air Pollution Control Division (APCD)

2010 Colorado 5 Year Monitoring Network Assessment. Available online at:
http://www.colorado.gov/airquality/documents/2010_CO_5yr_Network_Assessment.pdf.
Updated June 30, 2011.

CDPHE-WQCC

2010 Colorado Department Of Public Health And Environment, Water Quality Control Commission, Regulation No. 93 Colorado's Section 303(D) List of Impaired Waters and Monitoring and Evaluation List, Effective April 30, 2010. (Accessed 1/16/2012)

CDPHE-WQCC

2012 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. (Accessed 1/16/2012)

COGCC Colorado Oil and Gas Conservation Commission web site database
<http://cogcc.state.co.us/> accessed 08/03/2012

Conner, Carl E., and Barbara Davenport

2012 Class III Cultural Resource Inventory Report for the proposed Fletcher Gulch Federal #22-14 Well Location in Rio Blanco County, Colorado for Laramie Energy II. Grand River Institute, Grand Junction, Colorado. (12-11-14: ASHPO # RB.LM.R1288)

Donnell, John R., and William J. Hail, Jr.

1982, Preliminary Geologic Map of the Calamity Ridge Quadrangle, Rio Blanco County, Colorado: U.S. Geological Survey Geologic Quadrangle Map, Map MF-1690

Environmental Protection Agency (EPA).

2012 Currently Designated Non-Attainment Areas for all Criteria Pollutants. Updated as of July 20, 2012. Available online at:
<http://www.epa.gov/oaqps001/greenbk/ancl.html>. Accessed October 10, 2012.

Tweto, Ogden

1979 Geologic Map of Colorado. United States Geological Survey, Department of the Interior, Reston, Virginia

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	10/31/2012
Zoe Miller	Ecologist	Areas of Critical Environmental Concern; Special Status Plant Species; Forest Management	11/1/2012
Michael Selle	Archaeologist	Cultural Resources; Native American Religious Concerns; Paleontological Resources	6/18/2012

Name	Title	Area of Responsibility	Date Signed
Tyrell Turner	Rangeland Management Specialist	Invasive, Non-Native Species; Vegetation; Rangeland Management	10/25/2012
Laura Dixon	Wildlife Biologist	Migratory Birds; Special Status Animal Species; Terrestrial and Aquatic Wildlife; Wetlands and Riparian Zones	11/1/2012
Chad Schneckenburger	Outdoor Recreation Planner	Wilderness; Visual Resources; Access and Transportation; Recreation; LWCs	10/24/2012
Scott Nilson	Fuels Specialist	Fire Management	10/25/2012
Paul Daggett	Mining Engineer	Geology and Minerals	10/25/2012
Janet Doll	Realty Specialist	Realty	6/21/2012
Melissa J. Kindall	Range Technician	Wild Horse Management	10/16/2012
Brett Smithers	Natural Resource Specialist	Project Lead – Document Preparer	11/1/2012
Heather Sauls	Planning & Environmental Coordinator	NEPA Compliance	11/5/2012

ATTACHMENTS:

Appendix A: Proposed Surface Use Plan

Figure 1: Overview map of the proposed disturbance features

Figure 2: Aerial imagery map that shows the geographic extent of the proposed disturbance features, existing road corridors, and existing vegetative cover.

Appendix A: Proposed Surface Use Plan

LARAMIE ENERGY II, LLC

13- Point Surface Use Plan

<u>Well</u>	<u>Otrqtr</u>	<u>Sec.</u>	<u>Twn.</u>	<u>Rng.</u>	<u>PM</u>	<u>Lease</u>	<u>Unit</u>
FG Fed 22-14-22-01H	Lot 12	4	1 N	100 W	6 th	COC-63322	COC-75153X

Rio Blanco County, CO

References

On-site with BLM 3/28/2012

CO-110-2010-0043EA

ROD 6-1-2011

And

CO-110-2009-0180-EA

ROD 12-8-2009

13 Point Surface Use Plan

LARAMIE ENERGY II, LLC

Fletcher Gulch Fed. 22-14-22-01H

Lease No. COC-63329
Unit: FG (Deep) COC-75153X
Rio Blanco County, Colorado

Proposal:

Laramie Energy II, LLC (LEII), is proposing to drill and complete the above referenced exploratory natural gas well to comply with Section 9 (Drilling to Discovery) of the Fletcher Gulch (Deep) Exploratory Unit Agreement which states in part...“Until the discovery of unitized substances capable of being produced in paying quantities, the Unit Operator shall continue drilling one well at a time, allowing not more than 6 months between the completion of one well and the commencement of drilling operations for the next well, until a well capable of producing unitized substances in paying quantities is completed to the satisfaction of the AO...”

1. Existing Roads:

For Access Roads and proposed Access Road refer to the Vicinity Map.

- A. To access the well location, travel east from Rangely, CO, along State Highway 64 approximately 12.0 miles (west from Meeker approximately 46 miles) to the intersection of the Hammond Draw Road). Travel south on Hammond Draw road approximately 1.8 miles to a fork in the road. Take the right fork and continue on for approximately 1.60 miles to the proposed location entry.

2. Planned Access Roads Common:

No new access road is planned at this time other than the entry to the location. The existing road will need to be upgraded by Laramie II. Upgrading will be possible curve widening, graveling and drainage work for stormwater management. If any additional work is required on the access, the following (sections B-H) will be implemented.

In addition to the following construction parameters, E-mail correspondence from the WRFO on May 15, 2012 included the following observations. Most of these recommendations are already addressed in the road portion of this surface use plan.

- Keep all current waterbars, they have a good design and should be maintained during the rig move and other operations that result in heavy truck traffic.
- All installed culverts should be at least 18-inches in diameter. No size is given for the culverts on the large drainages on sheet 1. Use large culverts (at least 24-inch) at these tight crossings to reduce fill and to keep these culverts from plugging.
- The BLM preferred travelway for resource and local roads is 14 feet with turnouts. The operator needs to include turn-outs that are intervisible in the design. These turnouts should be identified in the surface use plan. (Gold Book, pages 25 and 26, Onshore order 1). Turnouts must be at most 1,000 feet apart according to the Gold Book.

- If the operator cannot avoid using the road when the road base is saturated, they should plan for gravel or other surfacing for the road section before the rocky section identified on sheet 2 (Gold Book, page 25). I think given the amount of rock and a change in soils, the rest of the road should be ok with spot graveling.
- Plan to add water bars or culverts in road sections as a maintenance action in locations where the borrow ditches are down-cutting to provide cross drainage. There are a few short steep sections that could use additional drainage, although most of the segments are adequate. Therefore, this should be identified but left for a future management action to see how the improvements will perform.

A. Summary of New Access Road (Entry)

FG Fed. 22-14-22-01H

- | | |
|---|--|
| 1. Approximate length | 300 ft |
| 2. Requested construction width | 50 ft |
| 3. Road width | 16 ft |
| 4. Maximum grade | 8 % |
| 5. Crown design | Yes |
| 6. Turnouts | None |
| 7. Drainage and Ditch | Yes |
| 8. On-site and Off-site erosion control | Refer to Attachment No. 1- Site Specific Stormwater Management Plan. |
| 9. Revegetation of disturbed areas | Refer to Attachment No. 2- Site Specific Reclamation Plan |
| 10. Location and size of culverts | 1-18" CMP Refer to "Pad Layout" and "Stormwater BMP's" Exhibits for location |
| 11. Fence cuts and gates | None |
| 12. Major cuts and fills | None |

B. Any new road construction will conform to recommended standards outlined in The Oil and Gas Gold Book-Surface Operating Standards and Guidelines for Oil and Gas Exploration and Development (BLM and USFS, 2006).

C. All new access roads will be designed and constructed by the crown and ditch method with a maximum of 8-10 percent grade. The roads will have a 16 foot travel surface with 4 feet on each side for borrow ditch. The road disturbed width will be determined by the topography but not greater than 50'. Construction will be accomplished to minimize any disturbance yet construct a travel way that is both safe and structurally sound. Entries to the well pad will be 100 feet wide to allow for 40 foot turning radius both left and right entering and exiting the location. Once the entry and road is completed, the disturbed area will be reclaimed back to the 16 feet travel width and 4feet shoulders for borrow and stormwater ditch management. Total long term disturbance will be 24 feet.

D. LEII's policy is to implement the use of the existing vegetation and topography to minimize the visual and surface disturbance impacts to the environment. Any vegetation that will require removal will be stored and be redistributed over the cut and fill slopes after re-seeding. Some of the vegetation debris will be placed at the toe of the fill slopes to be used for stormwater management. Any pinyon trees removed during construction will be chipped and used for mulch, or will be cut and removed from the area.

- E. The topsoil will be stripped to minimum depth of 6 inches. Or lacking top soil, the top 6 inches of soil will be stripped and stockpiled separate from other spoils to ensure soil horizons are not blended and the fertility of the topsoil layer is not compromised. Under no circumstances, will the topsoil be used for construction purposes.
- F. Culverts will be installed at drainage crossings and will pass a 25-year or greater storm event. LEII will submit an ACOE 404 permit for any crossings that are determined to be navigable waters. Best Management Practices will be implemented at each drainage crossing and for the entire length of the road where deemed necessary to comply with State of Colorado Stormwater requirements.
- G. LEII a will be responsible for continuous inspection and maintenance of the access road. LEII will conform to a schedule of preventive maintenance, which at a minimum, provides for the following corrective measures on as needed basis. (Problem areas will be corrected as needed.)
 - 1. Road surface grading.
 - 2. Relief ditch, culvert cleaning and cattle guard cleaning and sign maintenance.
 - 3. Erosion control measures for cut and fill slopes and all other disturbed areas.
 - 4. Road and slope stabilization measures as required. The road will be maintained to the standards required for the construction of the road until final abandonment and rehabilitation takes place.
 - 5. Stormwater BMP maintenance.
 - 6. Dust abatement will be applied as needed or if requested by the BLM. Level and type of abatement (watering, application of various dust suppression agents, surfacing) will depend on the conditions. LEII will incorporate sufficient dust abatement to prevent any heavy plumes of dust from construction or road use.
 - 7. Weed Control. Weed monitoring and reclamation measures will be continued on an annual basis, or more frequently, if necessary, throughout the life of the project.
- H. All equipment and vehicles will be confined to the access roads, pads and areas specified in the site specific APD's. The proposed new access and footages are included in Table 1.

3. Location of Existing Wells:

The "Well Vicinity Map" illustrates the location of individual well sites in various states of activity within a one-mile radius relative to each location as identified by the Colorado Oil and Gas Conservation (COGCC) website database. As of May 07, 2012, there are 2 abandoned gas wells within one-mile of the proposed FG Fed. 22-14-22-01H.

As of May 07, 2012, the State of Colorado water well database identifies no permitted water wells within a one-mile radius of the proposed well location.

Table 1. Proposed Well Pads, Roads						
Well Pad	Lease	Legal Description T2N, R100W	Surface	Short Term Acres	Long Term Acres	Remarks
FG Fed. 22-14-22-01H	COC-63329	SESW Sec.22	BLM	4.1	1.0	Includes New Access
Subtotal			BLM	4.1	1.0	

Well Pad	Gas Line		Legal Description T2N, R100W				
	miles	ft.					
FG Fed. 22-14-22-01H	0.06	300	SESW Sec. 22	BLM	0	0	Buried in Access Road Disturbance
Sub-Total	0.06	300			0	0	Part of Road Disturbance
TOTAL				BLM	4.1	1.0	76 % Interim

4. Location of Existing and/or Proposed Production Facilities and Production Gathering and Service Lines:

A. Existing Production Facilities and Gathering Lines

As part of its Fletcher Gulch “Shallow” Unit, Genesis has installed production facilities, buried “poly” water and gas gathering lines, and a Compressor Facility in Lot 10, Sec. 3, Twn. 1N Rng. 100 W, 6th PM in the area of the proposed well locations. The facility is Operated by Ceritas

B. Production Facilities

1. See “Production Schematic” for the proposed facility layout. All permanent (onsite for six (6) months or longer) structures constructed or installed will be painted a flat, non-reflective, earth tone color to match the standard environmental colors or colors requested by the WRFO. Facilities required to comply with the Occupational Safety and Health Act (OSHA) may be excluded. Production facilities will be placed to allow maximum reshaping of cuts and fills.
2. If a tank battery is constructed, a metal containment ring of sufficient capacity to contain 1 ½ times the storage capacity of the largest tank will surround it. All load lines and valves will be placed inside the metal containment ring surrounding the tank battery. Guards will be installed around the well head(s) for protection of wild life and livestock.
3. All site security guidelines identified in 43 CFR 3162.7 regulations will be adhered to.
4. All off-lease storage, off-lease measurement or commingling on-lease or off-lease will have prior written approval from the Authorized Officer.
5. All product lines entering and leaving hydrocarbon storage tanks will be effectively sealed in accordance with 43 CFR 3164.1 Onshore Oil and Gas Orders No. 3 (Site Security).
6. The oil and gas measurement facilities will be installed on the well locations. The oil and gas meters will be calibrated in place prior to any deliveries. Tests for meter accuracy will be conducted monthly for the first three (3) months on new meter installations and at least quarterly thereafter. The Authorized Officer will be provided with a date and times for the initial meter calibration and all future meter proving schedules. A copy of the meter calibration report will be submitted to the Field Office. All meter measurement facilities will

conform to the API standards for liquid hydrocarbons and the AGA standard for natural gas measurement.

7. To minimize the amount of vehicular traffic to and from the project site, remote telemetry equipment will be installed at each well location.

C. Gathering Lines

As this well is strictly an exploratory well, Laramie II prefers to limit as much new disturbance as possible until the project becomes viable. This includes using existing roads and any existing pipelines already in place but not in service.

Immediately paralleling the access road are two buried gas lines. The lines were installed as part of Genesis Gas and Oil Fletcher Gulch shallow Unit. One line is currently in service and is the sales(or discharge) line from the existing compressor facility in Lot 10 Section 3, Twn 1N, Rng. 100W. The second line is a future “gathering” line that is currently not in service. Laramie II intends to temporarily use this line to move the gas from the well to the compressor facility for treatment and compression.

By tying in to this line, approximately 17,300 feet of pipeline ROW will not be required to test the well. At a 50’ disturbance width this saves approximately 19.8 acres of disturbance.

Once the well proves capable of production LEII will present a proposal for a buried gathering system for the well and future development.

- D. LEII will protect all survey monuments, witness corners, reference monuments and bearing trees in the affected areas against disturbance during construction, operations, maintenance and termination of the facilities authorized herein.

LEII will immediately notify the Authorized Officer (White River Field Office) in the event that any corners, monuments or markers are disturbed or are anticipated to be disturbed. If any monuments, corner or accessories are destroyed, obliterated or damaged during construction, operation or maintenance, LEII will secure the services of a Registered Land Surveyor to restore the disturbed monuments, corner or accessories, at the same location, using surveying procedures found in the Manual of Surveying Instructions for the Survey of public Lands of the United States, latest edition. LEII will ensure the Registered Land Surveyor properly records the survey in compliance with Colorado Revised Statutes 38-53-101 through 38-53-112 (1973) and LEII will send a copy to the Authorized Officer.

- E. During drilling and subsequent operations, all equipment and vehicles will be confined to the access road right- of-way and any additional areas as specified in the approved Application for Permit to Drill.
- F. Topsoil will be stripped to a minimum depth of 6”. Topsoil storage will be no deeper (higher) than the minimum height needed for storage without creating a large feature. If topsoil is less than 6”, then the top 6” of surface material will be stripped and piled as described. The topsoil piles will be seeded within 48 hours of completed pad construction.
- G. The cut and fill slopes will be protected against riling and erosion with measures such as water bars, lateral furrows, or other measures approved by the Authorized Officer. Weed free straw

bales or a fabric silt fence will be used at the toe of the fill slopes with brush/slash incorporated below the fence.

H. LEII or its successors will be responsible for road maintenance for the life of the project.

5. Location and Type of Water Supply:

Water for the well will be trucked or pumped from approved sources. In addition, LE II is working with Genesis to use the water produced from the Fletcher Gulch CBM wells for drilling and completion operations. The remainder of the water needed will be purchased from a private entity from their water well or private individuals with water rights on the Colorado River. The Colorado Division of Water Resources requires the owner to meter the volume pumped and augment all diversions with industrial contracts with the Bureau of Reclamation.

LEII has a Recovery Agreement with the U.S. Fish and Wildlife and is covered by the BLM's Programmatic Biological Opinion for water depletion. A copy of this agreement is part of this submittal.

Estimated water usage for the drilling and completion of one horizontal well is 10.0 acre-ft. Approximately 65% -70 % (6.5 – 7.0 acre-ft.) of the water is recovered during completion operations and is recycled and used in other drilling and completions of other wells operated by LEII.

6. Source of Construction Materials:

No construction materials are needed for drilling operations. Surface and subsoil(native) materials within the proposed construction areas will be used. Gravel for the access roads, facilities site and well pad will be obtained from private sources at the time of construction. The surface disturbance for the new access roads, facilities, and well pads are on Bureau of Land Management Lands (BLM).

7. Methods of Handling Waste Disposal:

- A. All unattended pits, will be fenced (stock tight) while drilling with three (3) sides fenced. Once drilling is completed the fourth side of the pit will be fenced. When it has been determined to backfill the cuttings pit, the pit will be reclaimed.
- B. LEII proposes to use a de-watering system in its drilling operations. The system uses a series of centrifuges to remove the cuttings from the drilling fluid and returns the fluid to tanks while the cuttings (~250 cubic yards per well) are disposed of in a cuttings pit on location. By using this method eliminates the need for a separate reserve pit. The system has proved successful in drilling operations within the Piceance Basin. The cuttings pits will be constructed to the size anticipated for the depth of the well to be drilled each. If time allows, the pit will be reclaimed prior to the end of the drilling season to eliminate any wildlife concerns.
- C. Produced waste water and drilling fluids including salts and chemicals will be contained in tanks and will be trucked to a State Approve disposal facility (RNI disposal in Rangely) after completion of the well. After completion of all drilling and completion operations, the cuttings pit will be reclaimed.
- D. Produced Water Management
General:

Completion Phase: All “frac” flowback water will be contained in temporary tanks during completion operations and re-cycled and re-used or trucked offsite to approved commercial disposal facilities.

Production Phase: Permanent 400 bbl steel tanks, will be installed on the well pad to store produced water and condensate. These tanks will be onsite for the life of the wells. Produced water contained in the storage tanks will be trucked to offsite disposal facilities.

The Anticipated Disposal Site for the project is:

RNI (Dalbo) Evaporation Facility – Rangely, CO

Condensate will be measured and sold in compliance with Onshore Oil and Gas Order No. 4 (Measurement of Oil) and Oil and Gas Order No.3(Site Security).

- E. All drilling fluids and chemicals will be contained in tanks through the de-watering system.
- F. Sewage: Chemical toilets or an enclosed sewer system will be used. Contents will be disposed of at an approved disposal facility. No bore holes will be used for disposal of waste materials. Human waste will be contained and will be disposed of at an approved sanitary landfill.
- G. Garbage and other waste materials: Garbage will be managed to avoid conflict with wildlife, including black bears. All garbage and trash will be stored in a totally enclosed trash container and removed and deposited in an approved sanitary landfill within one week following termination of drilling operations. No garbage or trash will be disposed of in the cuttings pit. The wellsite and access road will be kept free of trash and debris at all times.
- H. LEII will comply with those standards set forth by CERCLA and RICRA for the disposal of hazardous waste materials from oil and gas development. Also, hazardous substances specifically listed by the EPA as a hazardous waste or demonstrating a characteristic of a hazardous waste will not be used in drilling, testing, or completion operations.

8. Ancillary Facilities:

There are no ancillary facilities planned beyond the standard drilling operations equipment at this time.

Standard Drilling Operation Equipment on location includes: Drilling rig with associated equipment; living facilities for company representative, tool pusher, mud logger, toilet facilities; and trash container(s).

9. Wellsite Layout:

The surface location was surveyed and oriented to accommodate the topography of the project area as well as to minimize the surface disturbance.

The following applies:

- A. The working surface of the well pad will be about 275 feet by 425 feet (2.79 acres including the access). The total disturbed area for the pad and new access is estimated to be 4.1 acres and includes cut and fill slopes, soil stockpile, and surface water diversions/BMPs.
- B. The topsoil will be stripped to minimum depth of 6 inches. Or lacking top soil, the top 6" of soil will be stripped and stockpiled separate from other spoils to ensure soil horizons are not blended and the fertility of the topsoil layer is not compromised. Under no circumstances, will the topsoil be used for construction purposes.
- C. Fill slopes will be armored with excavated rock and/or slash vegetation as well as having silt containment installed to reduce the velocity of rain drops and subsequent erosion along the toe of the well pad fill slope. Also, if needed, aspen matting will be lain down to allow for erosion mitigation as well as enhancing reestablishment of vegetation.
- E. Prior to commencement of drilling operations, the cuttings pit will be fenced on three (3) sides using three strands of barbed wire according to the following minimum standards:
 - 1. Corner posts shall be cemented and/or braced in such a manner to keep the fence tight at all times.
 - 2. Standard steel, wood, or pipe posts shall be used between the corner braces. The maximum distance between any two (2) posts shall be no greater than sixteen (16) feet.
 - 3. All wire shall be stretched using a stretching device before it is attached to the corner posts.
 - 4. The fourth side of the cuttings pit will be fenced immediately upon removal of the drilling rig and the fencing will be maintained until the pit is backfilled.
- F. Cut slopes, associated with pad construction, will be left rough to provide a seed catchment surface, and may require 'step cutting' if heights exceed 15 feet.

Well Site Specifics

1. FG Federal 22-14 Pad

Surface vegetation on the FG Fed. 22-14 pad is predominantly sagebrush intermingled with juniper trees and mixed mountain shrubs. The Natural Resource Conservation Service identifies the soil properties at the pad location and surrounding area as "Yamac Loam" (NRCS Map Unit 104).

Access to the location will require 300' of new construction. The road will have a graveled 16' travel width stormwater ditches on each side to manage run-off.

Initial disturbance area of the pad will be 4.1 acres with an interim reclamation area of 1.0 acres once the well is drilled and completed. See attached "Production Schematic"

Stormwater BMP's will include but is not limited to stormwater control ditch around the pad as well as along the new access to manage sediment and stormwater run-off.

- 1. Pad length.....425 ft.
- 2. Pad width..... 275 ft.
- 3. Cuttings pit depth.....10 ft.
- 4. Maximum cut.....10.8 ft. (NW corner)
- 5. Maximum fill.....8.8 ft. (SE corner)
- 6. Location of excess material*..... 2530 yd³ Windrow NW Edge of Pad)

- 7. Location of topsoil material** Windrow NE and SE Edge of Pad
- 8. Access Road location.....NE edge of pad (East of CL)
- 9. Pad and stockpile disturbance.....3.80 acres
- 10. Total disturbance (pad, access road, and material stockpile).....4.1 acres
- 11. Total material stockpiles.....0.60 acres
- 12. Access road disturbance.....0.30 acre
- 13. Estimated dirtwork quantities
 - Total cut material.....11,730 yd³
 - Total fill material.....8,870 yd³
 - Topsoil.....2,550 yd³
 - Cuttings Trench.....2,220 yd³
 - Total Excess Material = Cut-TS-Fill+Trench= 2530 yd³

- * Excess material may change based on amount of topsoil removed. Spoils will be separated and stockpiled independent of topsoil.
- ** Volume of topsoil may change do to depth of removal.

10. Plans for Restoration of the Surface:

See Attachment II for Interim and Final Reclamation of the site.

11. Surface and Mineral Ownership:

The new location entry and surface location is entirely on Bureau of Land Management lands managed by the White River Field Office of the BLM. The mineral estate is also entirely Federal including lease COC-63329.

The existing access road from Highway 64 is entirely on BLM lands managed by the WRFO.

12. Other Information:

- A. Once the well is drilled and completed LEII's will prepare a Spill Prevention Control and Countermeasures (SPCC) plan for the site. Normally, these plans are not completed until the production facilities are in place and producing.
- B. Attached to this proposal is LEII's standard wildlife BMP's for Sensitive Wildlife Areas (SWA's).
- C. LEII has incorporated the Glenwood Springs Energy Office (CRVFO) March 2007 "Noxious and Invasive Weed Management Plan for Oil and Gas Operators" (attached) into all LEII operations on Federal and Fee lands.
- D. LEII is responsible for informing all persons in the area who are associated with this project that they will be subject to prosecution for knowingly disturbing historic or archaeological sites, or for collecting artifacts or fossils. LEII will immediately bring to the attention of the Authorized Officer (BLM White River Field Office) any and all antiquities or other objects of historic or scientific interest including, but not limited to, historic or prehistoric ruins, artifacts, or fossils discovered as a result of operations under this permit. LEII will immediately suspend all activities in the area of the object and will leave such discoveries intact until told to proceed by

the Authorized Officer. Notice to proceed will be based upon evaluation of the cultural significance of the object.

- E. LEII implements Best Management Practices (BMP's) to minimize or eliminate the nature and degree of specific impacts which may occur from oil and gas exploration and development. These could include but are not limited to:
 - 1. Erosion Control- seeding, mulching, fertilizing, and netting.
 - 2. Slope Stabilization - buttresses, retaining structures, rip-rap, etc.
 - 3. Velocity Control - slope drains, spreaders, energy dissipaters, check dams, drop structures, and diversion berms.
 - 4. Sediment Control - straw bales, filter fence, inlet protection, siltation berms, traps, and basins.
 - 5. Sediment Basins - will be maintained on a regular basis.
- F. Sediment will be trapped before it reaches lakes, wetlands/riparian areas, intermittent drainage channels, and streams.
- G. Army Corp. of Engineer 404 permits will be submitted for any drainages determined to be navigable waters.
- H. Miscellaneous Information.
 - 1. There will be no deviation from the proposed drilling and/or workover program without prior approval from the Authorized Officer. Safe drilling and operating practices will be observed.
 - 2. Sundry Notice and Report on Wells (Form 3160-5) will be filed for approval for all changes or plans and other operations in accordance with 43 CFR 3164.
 - 3. The dirt contractor will be provided with an approved copy of the surface use plan.

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

Operator Representative: Wayne P. Bankert (Senior Reg. and Env. Coordinator)
Laramie Energy II, LLC
601 28 ¼ Rd Suite D
Grand Junction, CO 81506
O: 970-812-5310
M: 970-985-5383
wbankert@laramie-energy.com

Operator: Laramie Energy II, LLC
1512 Larimer Street, Suite 1000
Denver, CO 80202
O: 303-339-4400

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

Representative Certification:

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

By: _____

Wayne P. Bankert
Senior Regulatory and Environmental Coordinator

Date: _____

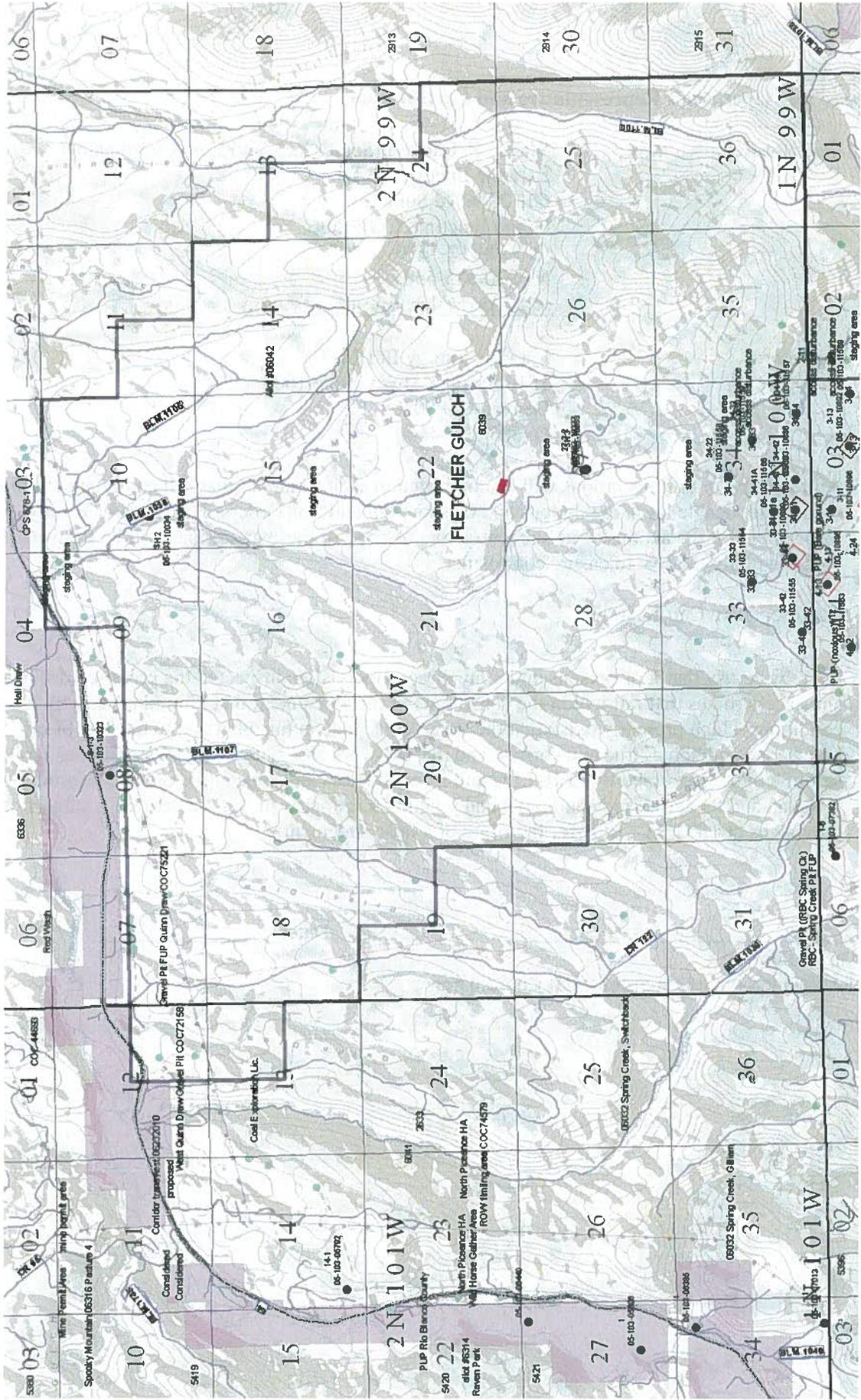


Figure 1. The figure above illustrates the geographic location of the proposed Fletcher Gulch FED 22-14-22-01H well in the Fletcher Gulch Unit. The proposed well pad is symbolized as a red polygon.

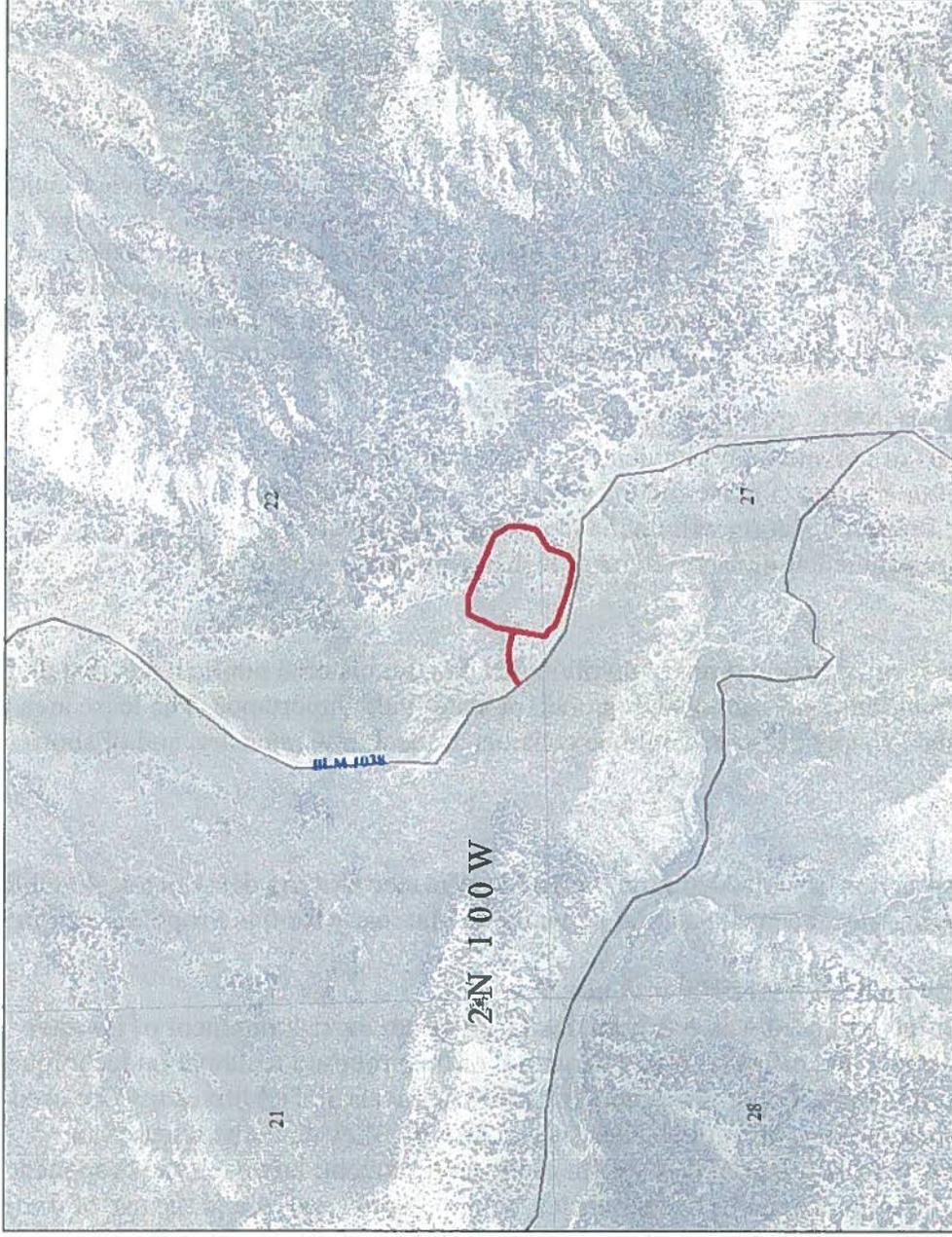


Figure 2. The figure above illustrates the geographic extent of the proposed disturbance features, existing road corridors, and existing vegetative cover. The proposed well pad is symbolized as a red polygon, and the proposed access corridor is symbolized as a red line. The proposed pipeline segment will be buried in the road corridor.

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

**Finding of No Significant Impact (FONSI)
DOI-BLM-CO-110-2012-0069-EA**

BACKGROUND: Laramie Energy II, LLC (LEII) is proposing to drill and complete Fletcher Gulch FED 22-14-22-01H exploratory natural gas well to comply with Section 9 (Drilling to Discovery) of the Fletcher Gulch (Deep) Exploratory Unit Agreement. In addition, Laramie would construct 300 feet of road to access the proposed location. The proposed pipeline corridor would follow the proposed access road and tie into an existing pipeline to the west of the proposed location. The proposed spud date for this well is April 1, 2013. See Appendix A for the proposed Surface Use Plan for the proposed well.

FINDING OF NO SIGNIFICANT IMPACT

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

Context

The project is a site-specific action directly involving BLM administered public lands that do not in and of itself have international, national, regional, or state-wide importance. 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 site location for the proposed well has been described as having a component of invasive, annual cheatgrass. Proper and effective implementation of the proposed reclamation techniques could increase plant diversity. While potentially harmful chemicals and additives may be used during drilling and completions operations, there is a possibility they could be released in volumes that could adversely affect human health or the environment; however, the proponent provides for safe containment and disposal of each type of potential waste, and the use of these materials are expected to enhance the beneficial recovery of the natural gas resource.

2. The degree to which the Proposed Action affects public health or safety.

There would be no impact to public health and safety if the safety measures described in the operator's drilling plan and SUP are properly implemented, and the developed mitigation is adhered to.

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

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

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

6. Degree to which the action may establish a precedent for future actions with significant effects or represents a decision in principle about a future consideration.

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

7. Whether the action is related to other actions with individually insignificant but cumulatively significant impacts. Rangeland used for livestock grazing has been described as populated with cheatgrass; implementation of the Proposed Action alone would not substantially contribute to the quality of the rangeland resources but an increase in construction-related oil and gas activities (reasonable but not yet proposed or speculated for the project area) could cumulatively result in irreversible changes to plant species composition. The winter ranges north of the White River remain one of the few areas with limited oil and gas-related development. Increased and expansive development in this area would be expected to contribute to reductions in important big game wintering habitat with potential cumulative consequences for local big game populations.

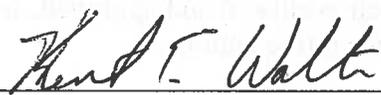
8. The degree to which the action may adversely affect districts, sites, highways, structures, or objects listed on the National Register of Historic Places or may cause loss or destruction of significant scientific, cultural, or historical resources. A Class III inventory identified no new cultural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

9. The degree to which the action may adversely affect an endangered or threatened species or its habitat that has been determined to be critical under the Endangered Species Act (ESA) of 1973. No special status plant species concerns have been identified. Cumulative water depletions from the Colorado River Basin are considered likely to jeopardize the continued existence of the Colorado pikeminnow, humpback chub, bonytail, and razorback sucker and result in the destruction or adverse modification of their critical habitat. In 2008, BLM prepared a Programmatic Biological Assessment (PBA) that addressed water depleting activities

associated with BLM's fluid minerals program in the Colorado River Basin in Colorado, including water used for well drilling, hydrostatic testing of pipelines, and dust abatement on roads. In response, the U.S. Fish and Wildlife Service (FWS) prepared a Programmatic Biological Opinion (PBO) that addressed water depletions associated with fluid minerals development on BLM lands. The PBO included reasonable and prudent alternatives which allowed BLM to authorize oil and gas wells that result in water depletion while avoiding the likelihood of jeopardy to the endangered fishes and avoiding destruction or adverse modification of their critical habitat. The reasonable and prudent alternative authorized BLM to solicit a one-time contribution to the Recovery Implementation Program for Endangered Fish Species in the Upper Colorado River Basin (Recovery Program) in an amount based on the average annual acre-ft depleted by fluid minerals activities on BLM lands. This contribution was ultimately provided to the Recovery Program through an oil and natural gas development trade association. Development associated with this project would be entered into the WRFO fluid minerals water depletion log that is submitted to the Colorado State Office at the end of each Fiscal Year.

10. Whether the action threatens a violation of Federal, State, or local law or requirements imposed for the protection of the environment.

Neither the Proposed Action nor impacts associated with it violate any laws or requirements imposed for the protection of the environment.

SIGNATURE OF AUTHORIZED OFFICIAL: 
Field Manager

DATE SIGNED: 11/28/12

**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: Laramie Energy Fletcher Gulch FED 22-14-22-01H Well

ENVIRONMENTAL ASSESSMENT NUMBER: DOI-BLM-CO-110-2012-0069-EA

DECISION

It is my decision to implement the Proposed Action as mitigated in DOI-BLM-CO-110-2012-0069-EA, authorizing the construction, operation, and maintenance of Laramie Energy's proposed Fletcher Gulch FED 22-14-22-01H well, well pad, and associated pipeline and access corridor.

Mitigation Measures:

1. Laramie Energy II, LLC will treat all access roads with water and/or a chemical dust suppressant during construction and drilling activities so that there is not a visible dust trail behind vehicles. Any technique other than the use of freshwater as a dust suppressant on BLM lands will require prior written approval from BLM.
2. To assure adequate topsoil is saved for reclamation, a minimum of 6 inches of topsoil will be salvaged from the pad site and stored undisturbed, seeded and covered with erosion fabric or mulch to preserve soil characteristics for interim reclamation.
3. In order to protect rangeland health standards for soils, erosion features such as rilling, gullyng, piping and mass wasting on the surface disturbance or adjacent to the surface disturbance as a result of this action will be addressed immediately after observation by contacting the AO and by submitting a plan to assure successful soil stabilization with BMPs to address erosion problems.
4. All construction activity shall cease when soils or road surfaces become saturated to a depth of three inches unless approved by the Authorized Officer.
5. To protect surface waters below the project area, keep road inlet and outlet ditches, sediment retention basins, and culverts free of obstructions, particularly before and during spring runoff and summer convective storms. Provide adequate drainage spacing to avoid accumulation of water in ditches or road surfaces. Install culverts with adequate armoring of inlet and outlet. Patrol areas susceptible to road or watershed damage during periods of high runoff.
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 that does not pose a risk of harm to human

health or the environment (e.g., cedar bark, shredded cane stalks, mineral fiber and hair, mica flakes, ground and sized limestone or marble, wood, nut hulls, corncobs, or cotton hulls).

7. In addition to the design features submitted by the applicant in the SUP, the applicant shall use seed that is certified and free of noxious weeds. All seed tags will be submitted to the designated Natural Resource Specialist within 14 calendar days from the time the seeding activities have ended via Sundry Notice (SN). The SN 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 as-built shape-file of the area seeded, an attached map that clearly identifies all disturbed areas that were seeded, and the date the seed was applied.
8. Reclamation success criteria must be consistent with current WRFO reclamation success criteria as outlined below.
 - a. Adequate desirable vegetative groundcover is established on disturbed surfaces to stabilize soils through the operational life of the project.
 - b. Reclamation would be considered successful once attaining 50 percent total vegetative cover. On woodland or shrub sites, this would equate to the capability of those sites in an herbaceous state.
 - c. The resulting plant community (in a healthy early seral state) must contain at least five desirable plant species, at least one of which must be a forb or shrub, each comprising at least 5 percent relative cover. No one species may exceed 70 percent relative cover in the resulting plant community to ensure that site species diversity is achieved. Desirable species include those defined by the range site, seeded in the BLM approved mix, or other desired species found in the surrounding areas (approved by the BLM).
 - d. Cover, composition, and diversity data should be gathered using quantitative methods to measure the six Core Terrestrial Indicators and Methods in BLM Technical Note 440. Approved methods are found in Monitoring Manual for Grassland, Shrubland, and Savanna Ecosystems, Volume I and II: Quick Start. Other data collection methods such as those described in BLM Technical Reference 1730-1 or 1734-4 may be pre-approved by the BLM.
 - e. The vegetation community established on the reclaimed site is capable of persisting on the site without continued intervention (excluding routine weed management) and will allow plant community successional processes to progress toward advanced community states.
 - f. Bare ground does not exceed the range/ecological site description or if not described, bare ground will not exceed that of a representative undisturbed DPC meeting the Colorado Standards for Public Land Health.
 - g. Reclamation success in areas affected by cheatgrass, and/or other invasive species will be qualified based on the condition of the project site (i.e., the relative vegetative cover) prior to disturbance.

9. A Reclamation Status Report will be submitted electronically to the WRFO annually (due January 1st) for the life of the project. The Reclamation Status Report will include:
 - a. Reclamation status (e.g., interim or final)
 - b. Area reclaimed/seeded
 - c. Date seeded
 - d. Seeding method (e.g., broadcast, drilled, etc.)
 - e. Photos of the reclaimed site
 - f. Maps showing each point or polyline (i.e., access route) feature that will be included in the report and a shapefile (ArcMap) of invasive species and treatment locations
 - g. Contact information for the person(s) responsible for developing the report

10. A Reclamation Vegetation Monitoring Report should accompany the (above) status report every other year until successful reclamation is determined. This report should include (at a minimum) the following components to sufficiently and accurately characterize progress of the vegetative community establishment:
 - a. Vegetative attributes for seeded surfaces. Refer to BLM Core Terrestrial Indicators and Methods (Technical Note 440), preferably, or Technical Reference 1730-1 for guidance regarding quantitatively assessing vegetative species composition and cover. The size of each reclaimed area must be specified as well as the number of transects and points hit along the intercept. Indicators to measure and quantify:
 - b. Bare ground including rock fragment, woody debris, biotic soils (if applicable), and litter estimates
 - c. Plant cover
 - d. Vegetation composition
 - e. Relative cover of all plant species found in the line-point intercept monitoring
 - f. Plant species of management concern
 - g. Species richness over entire reclaimed area
 - h. Nonnative invasive species
 - i. Vegetation height
 - j. Proportion of soil surface in large inter canopy gaps

11. Construction equipment shall be cleaned prior to entering public land at a location and in a manner that does not result in further weed spread.

12. Topsoil stockpiles must be seeded immediately as part of Phase I interim reclamation.

13. BLM recommends using Seed Mix #2 below. Seed rates in the table below are shown for drill seeding rates and should be doubled for broadcast application. Seed should be applied anytime between mid-September and mid-March.

Native Seed Mix 2

Seed Mix	Cultivar	Species	Scientific Name	Application Rate (lbs PLS/acre)	
2	Arriba	Western Wheatgrass	<i>Pascopyrum smithii</i>	4	
	Rimrock	Indian Ricegrass	<i>Achnatherum hymenoides</i>	3.5	
	Whitmar	Bluebunch Wheatgrass	<i>Pseudoroegneria spicata ssp. inermis</i>	4	
	Lodorm	Green Needlegrass	<i>Nassella viridula</i>	2.5	
	Timp	Northern Sweetvetch	<i>Hedysarum boreale</i>	3	
		Sulphur Flower Buckwheat	<i>Eriogonum umbellatum</i>	1.5	
	Alternates:				
		Needle and Thread	<i>Hesperostipa comata ssp. comata</i>	3	
	Scarlet Globemallow	<i>Sphaeralcea coccinea</i>	0.5		

14. In order to achieve acceptable revegetation, BLM recommends that the entire reclaimed area associated with the pad be temporarily fenced (electric or barbwire fencing) for a minimum of three growing seasons to preclude livestock grazing. Fence construction, maintenance, and removal upon achieving successful reclamation are the responsibility of the project proponent.
15. Prior to the season of construction, the operators should submit Pesticide Use Proposals for the use of herbicides appropriate for control/eradication of the known noxious and invasive nonnative species within the project area.
16. The operator will eliminate any noxious plants before seed production has occurred. Application of pesticides and herbicides on public lands will conform to BLM manual 9015 and Appendix B of the BLM White River RMP, Management of Noxious Weeds (BLM 1997). Eradication should make use of materials and methods approved in advance by the AO. The operator will clean all off-road equipment to remove seed and soil prior to commencing operations on public lands within the project area.
17. Any future ground disturbance or maintenance activities may have the potential to require special status plant species surveys. If special status plants are found in the future there may be specific mitigation measures applied to reduce impacts to the species.
18. Vegetation removal and construction activities associated with well pad, road and pipeline development will take place outside the migratory bird nesting season of May 15 through July 15. Earthwork associated with the Proposed Action will be permitted from July 16 through May 14.
19. Although reserve pits are not planned with this project, in the event that they are built the operator shall prevent use by migratory birds of reserve pits that store or are expected to store fluids which may pose a risk to migratory waterfowl, shorebirds, wading birds and raptors during completion and after completion activities have ceased. Methods may include netting or other alternative methods that effectively prevent use and that meet BLM approval. It will be the responsibility of the operator to notify the BLM of the method that will be used to

prevent use two weeks prior to when completion activities are expected to begin. The BLM approved method will be applied within 24 hours after completion.

20. No development activities are allowed within CPW-designated big game critical winter range from December 1 to April 30. This applies to all acreage associated with the Proposed Action.
21. To minimize the incidents of young foals becoming dislocated from their mare or band, crews would be asked to slow or stop when wild horses are encountered, allowing the bands to move away at a pace slow enough so that the foal can keep pace and are not separated.
22. Regularly inspect of the open trench for trapped wild horses will be done and if injured animals are found will contact the BLM.
23. If a cattle guards is installed at fence crossings associated with access roads and/or pipelines will be upgraded to a horse proof cattle guard so that the risk of wild horses being trapped in a cattle guard is reduced.
24. Laramie Energy II, LLC 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.
25. If any paleontological resources are discovered as a result of operations under this authorization, Laramie Energy II, LLC or any of his agents must stop work immediately at that site, immediately contact the BLM Paleontology Coordinator, and make every effort to protect the site from further impacts, including looting, erosion, or other human or natural damage. Work may not resume at that location until approved by the AO. The BLM or designated paleontologist will evaluate the discovery and take action to protect or remove the resource within 10 working days. Within 10 days, the operator will be allowed to continue construction through the site, or will be given the choice of either (a) following the Paleontology Coordinator's instructions for stabilizing the fossil resource in place and avoiding further disturbance to the fossil resource, or (b) following the Paleontology Coordinator's instructions for mitigating impacts to the fossil resource prior to continuing construction through the project area.
26. 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.
27. Paint all aboveground facilities Juniper Green from the BLM Standards Environmental Color Chart CC-001: June 2008. All above ground facilities will be painted within 6 months of installation.
28. As a reasonable and prudent operator/ROW holder acting in good faith, LEII will report all emissions or releases that may pose a risk of harm to human health or the environment,

regardless of a substance's status as exempt or nonexempt and regardless of fault, to the BLM WRFO (970) 878-3800.

29. As a reasonable and prudent operator/ROW holder, acting in good faith, LEII will provide for the immediate clean-up and testing of air, water (surface and/or ground), and soils contaminated by the emission or release of any substance that may pose a risk of harm to human health or the environment, regardless of that substance's status as exempt or non-exempt. Where LEII fails, refuses, or neglects to provide for the immediate clean-up and testing of air, water (surface and/or ground), and soils contaminated by the emission or release of any quantity of a substance that poses a risk of harm to human health or the environment, the BLM WRFO may take measures to clean-up and test air, water (surface and/or ground), and soils at the LEII's expense plus an additional 25% as per 43 CFR 3163.1 (a)(4). Such action will not relieve LEII of any liability or responsibility.
30. Where required by law or regulation to develop a plan for the prevention of releases or the recovery of a release of any substance that poses a risk of harm to human health or the environment, provide a current copy of said plan to the BLM WRFO.
31. With the acceptance of this authorization, the commencement of operations under this authorization, or within thirty calendar days from the issuance of this authorization, whichever occurs first, LEII, and through its agents, employees, subcontractors, successors and assigns, stipulate and agree to indemnify, defend and hold harmless the United States Government, its agencies, and employees from all liability associated with the emission or release of substances that pose a risk of harm to human health or the environment.
32. 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, oil, or methanol, shall be stored in appropriate containers and in secondary containment systems sized at least 110% of the largest vessel's capacity. Secondary fluid containment systems, including but not limited to tank batteries shall be lined with a minimum 24 mil impermeable liner.
33. 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.
34. LEII shall comply with all Federal, State and/or local laws, rules, and regulations, including but not limited to Onshore Orders and Notices to Lessees, addressing the emission of and/or the handling, use, and release of any substance that poses a risk of harm to human health or the environment.
35. Through all phases of oil and gas exploration, development, and production, LEII 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 any substance that poses a risk of harm to human health or the environment.

36. When working on lands administered by the BLM WRFO, notify Craig Interagency Dispatch (970-826-5037) in the event of any fire.
- The reporting party will inform the dispatch center of fire location, size, status, smoke color, aspect, fuel type, and provide their contact information.
 - The reporting party, or a representative of, should remain nearby, in a safe location, in order to make contact with incoming fire resources to expedite actions taken towards an appropriate management response.
 - The applicant and contractors will not engage in any fire suppression activities outside the approved project area. Accidental ignitions caused by welding, cutting, grinding, etc. will be suppressed by the applicant only if employee safety is not endangered and if the fire can be safely contained using hand tools and portable hand pumps. If chemical fire extinguishers are used the applicant must notify incoming fire resources on extinguisher type and the location of use.
 - Natural ignitions caused by lightning will be managed by Federal fire personnel. The use of heavy equipment for fire suppression is prohibited, unless authorized by the Field Office Manager.
 - To avoid jack pots of fuel on site, vegetation which is not to be used for storm water management shall be chipped and mixed with topsoil for future redistribution.
37. Any range improvement or other livestock handling/distribution facilities that are damaged or destroyed as a direct or indirect result of implementation of the Proposed Action shall be promptly repaired or replaced by the applicant to restore pre-disturbance functionality.
38. The project proponent will ensure that through traffic along BLM Road 1038 remains open and unimpeded at all times.
39. Any damage to existing roads as a result of the Proposed Action will be repaired to a condition that is similar to the original state or better than what existed prior to the commencement of 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-110-2012-0069-EA and it was found to have no significant impacts, thus an EIS is not required.

PUBLIC INVOLVEMENT

Scoping was the primary mechanism used by the BLM to initially identify issues. Internal scoping was initiated when the project was presented to the White River Field Office (WRFO) interdisciplinary team on 6/12/2012. External scoping was conducted by posting this project on the WRFO's on-line National Environmental Policy Act (NEPA) register on 6/20/2012.

RATIONALE

Analysis of the Proposed Action has concluded that there are no significant negative impacts and that it meets Colorado Standards for Public Land Health. Additionally, authorization to drill the proposed well would allow for the development of an oil and gas lease that would otherwise expire.

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:



Field Manager

DATE SIGNED:

11/28/12