

**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-110-2010-132-EA

CASEFILE/PROJECT NUMBER: COC-064203 & COC-060754

PROJECT NAME: Buckhorn Draw Unit well pads (2) – BDU 13-9-299 & BDU 14-9-299

LEGAL DESCRIPTION: T2S, R99W, Sections 13 (NWSE) & 14 (NESE), 6th PM

APPLICANT: Mesa Energy Partners, L.L.C.

ISSUES AND CONCERNS (optional):

DESCRIPTION OF PROPOSED ACTION AND ALTERNATIVES:

Background/Introduction: The White River Field Office (WRFO) received Notices of Staking (NOSs) on March 19, 2010 for wells BDU 13-10-299 and BDU 14-10-299 within the eastern boundary of Mesa Energy Partners, LLC's Buckhorn Draw Unit that lies just east of Cathedral Bluffs. This was followed by an onsite inspection for these wells on April 22, 2010. The Applications for Permit to Drill (APDs) were subsequently received on July 30, 2010, and August 3, 2010, respectively. When the APDs were received, there was a name change for location BDU 13-10-299 and it is now BDU 13-9-299.

This Environmental Assessment (EA) has been prepared to analyze the potential impacts that could result from Mesa Energy drilling the proposed wells and associated actions such as constructing the proposed well pads and access roads, and installing the proposed pipelines.

Proposed Action: Mesa Energy Partners, LLC proposes to construct two well pads, drilling one well on each pad, and constructing and installing the associated access roads and pipelines.

BDU 13-9-299: The proposed action includes constructing one 320 ft x 400 ft well pad and drilling one well on the pad (see Table 1 for pad dimensions and total area disturbed). The proposal indicates the applicant would construct a total of 1,340 ft (0.25 miles) of road off of CR-68; upgrading 1,250 ft of existing pipeline ROW maintenance road, and installing 90 ft of new access road. In addition, the applicant will install 8,350 ft of gas pipeline and produced waterline. The pipelines would be installed in the same trench adjacent to existing roads, following the pipeline maintenance road northwest, then an unnamed dirt road to the southwest,

then CR-70 to the northwest to the tie-in point. Total acres disturbed including overburden to construct the well pad, access road, and pipeline corridor would be approximately +/- **16.62 acres**.

BDU 14-9-299: The proposed action includes constructing one 320 ft x 400 ft well pad and drilling one well on the pad (see Table 1 for pad dimensions and total area disturbed). The proposal indicates the applicant would construct a 710 ft (0.1 miles) access road off of CR-70; upgrading 310 ft of existing dirt trail, and installing 400 ft of new access road. In addition, the applicant will install 730 ft of buried gas pipeline and produced waterline. The pipelines would be installed in the same trench adjacent to the access road. Total acres disturbed including overburden to construct the well pad, access road, and pipeline corridor would be approximately **6.96 acres**.

Table 1. Pad dimensions and acres disturbed for the proposed well pads and access roads.

Well Pad	Pad Dimensions (ft)	Pad Disturbance ^a (Acres)	Access Dimensions (ft)	Access Disturbance ^a (Acres)	Pipeline Dimensions (ft)	Pipeline Disturbance ^a (Acres)	Total Site Disturbance ^b (Acres)
13-9-299	320 x 400	5.5	1,340 x 50	1.54	8,350 x 50	9.58	16.62
14-9-299	320 x 400	5.3	710 x 50	0.82	730 x 50	0.84	6.96
Overall Total Disturbance (Acres)^b							23.58

^a Estimate includes total acres disturbed for pad surface and overburden.

^b Estimate includes total acres disturbed for well pad, proposed access road and pipeline corridor.

^c Estimate pipeline disturbance is based on a 50ft ROW working surface during construction.

The Surface Use Plans of Operations (SUPO) and APD for both wells BDU 13-9-299 and BDU 14-9-299 are incorporated by reference, and summarized below:

Access

A) Existing roads within 1.0 mile of BDU 13-9-299 consists of County Road 20A, County Road 24X, County Road 24, County Road 68, County Road 70 and an existing dirt trail to within 0.2 miles, which will provide access to the proposed location.

B) Existing roads within 1.0 mile of BDU 14-9-299 consists of County Road 24, County Road 24X, County Road 68, County Road 70 and an existing dirt trail to within 0.2 miles, which will provide access to the proposed location.

C) Plans for improvement and/or maintenance of existing roads are to maintain in as good or better conditions than at present.

D) Borrow ditches for planned access roads to be backsloped 3:1 or shallower. Weather permitting, the access road will be mowed and the borrow ditch material will be pulled over the top of the mowed area.

E) Road construction on public lands shall meet the minimum standards listed in BLM Manual Section 9113 and shall be constructed under the direction of a qualified construction supervisor(s).

Production Facilities

A) All above ground permanent structures will be painted to blend with the surrounding landscape as per BLM recommendations. The typical paint color for this area is Standard Environmental Color Chart, Juniper Green. To reduce the view of production facilities from visibility corridors and private residences, facilities will not be placed in visually exposed locations (such as ridgelines and hilltops). All production facilities will be painted within six months of installation. Facilities that are required to comply with Occupation Safety and Health Administration (OSHA) Rules and Regulations will be excluded from this painting requirement. The tallest structure will be no greater than 20' in height.

B) Run off and sediment control Best Management Practices (BMPs) will be implemented and maintained according to the Buckhorn Draw Unit Storm Water Management Plan. Pursuant to Onshore Order No. 7 (OSO #7), this is a request for authorization for reserve pit disposal of water produced from this well for a period of 90 days from the date of initial production. A permanent disposal method must be approved by BLM and in operation prior to the end of this 90-day period. In order to meet this deadline, an application for the proposed permanent disposal method will be submitted along with any necessary water analyses, in compliance with OSO #7 as soon as possible, but no later than 45 days after the date of first production. Any method of disposal, which has not been approved prior to the end of the authorized 90-day period, will be considered as an Incident of Noncompliance and will be grounds for issuing a shut-in order until an acceptable manner for disposing of said water is provided and approved by BLM.

Pipelines

All flowlines and pipelines will remain within the federal Buckhorn Draw Unit boundary, identified by Serial Register No. COC73788X. No separate ROW applications should be necessary.

A) Protective measures and devices to protect livestock and wildlife will be implemented.

B) All buried pipelines will be buried to a depth of 3 - 4 feet, except at road crossings, where they will be buried to a depth of 4 feet.

C) Construction width of the right-of-way/pipeline route shall be restricted to 50 feet of disturbance.

D) Reclamation width of the right-of-way/pipeline route shall be approximately 14 – 16 feet.

Water Supply

A) Water to be used for the drilling and completing of this well may be delivered to the location via (1) pumping through a water pipeline, or (2) hauling by truck over the roads utilizing CR 68, CR24X, CR 5, CR 86 and Dry Fork Road. The water source may be from (1) recycled flow back water (frac water from completions), production water gathered from producing wells, or some combination thereof resulting from ongoing operations in the Piceance Basin that may be treated for reuse, or (2) fresh water from available water rights in the Piceance Basin.

B) The fresh water providers are Williams and EnCana. Due to possible summer water restrictions it is imperative that multiple sources be available for use. Williams fresh water will

come from their nearby *Ryan Gulch Ranch* fresh water loadout located at 39.864375 latitude and 108.430068 longitude. EnCana's fresh water source will come from the *Foote Ranch* loading facility located at -108.246316 latitude and 40.008838 longitude, NAD83.

C) Mesa Energy estimates that we will use ~5,000 bbls of fresh water for drilling, and ~50,000 bbls of either fresh or recycled water for completions. The amount of water used for dust abatement is estimated to be ~ 1,000 bbls/year. If it becomes necessary to truck water, CR 68, CR24X, CR 5, CR 86 and Dry Fork Road will be utilized.

Waste Disposal

A) Drill cuttings will be buried in reserve pit when dry.

B) Drilling fluid will be evaporated and then buried in the reserve pit when dry.

C) Completion fluids will be flowed to the reserve pit and allowed to evaporate.

D) Reserve pit layout is illustrated on Pad Layout, Production Schematic, Typical Rig Layout and Existing Contours. Dimensions of the pit are 80' x 120' x 15'

E) The reserve pit will be constructed to BLM Goldbook, OSO #1 and #7 standards and to meet the requirements of the Colorado Oil and Gas Conservation Commission (COGCC). The reserve pit will be lined with a synthetic liner 24 mil or thicker. The reserve pit liner shall be made of any manmade synthetic material of sufficient size and qualities to sustain a hydraulic conductivity no greater than 1×10^{-7} cm/sec after installation and which is sufficiently reinforced to withstand normal wear and tear associated with the installation and pit use thereof. The liner shall be chemically compatible with all substances that may be put into the pit.

F) Reserve pit will be fenced on three sides during drilling operations and on fourth side at time of rig release. Pit will remain fenced until backfilled.

G) The reserve pit will include appropriate netting or fencing and escape ramps as necessary to protect public health, safety and welfare or to prevent adverse environmental impacts resulting from access to a pit by wildlife, migratory birds, domestic birds, or members of the general public, in accordance with applicable BLM/COGCC rules and regulations.

H) Flare pit for air drilling will (if used) be located minimum 100' from well bore.

I) Produced fluid will be contained in test tanks during completion and testing.

J) Drilling fluids including salts and chemicals will be contained. Upon termination of drilling and completion operations, the mud will be transferred to another drilling location for use, dewatered and recycled, or removed and disposed of at an approved waste disposal facility within ninety (90) days after termination of drilling and completion activities.

K) In the event that adverse weather conditions prevent removal of the fluids from the mud system within this time period, an extension may be granted by the AO upon receipt of a written request from Mesa.

L) Produced fluids – liquid hydrocarbons produced during completion operations will be gathered in flow back tanks or a completion pit on location. Produced waste water will be confined to a completion pit or flow back tanks for a period not to exceed ninety (90) days after initial production.

M) Produced fluids – liquid hydrocarbons produced during production operations will be confined to a pit (water storage pit) or flow back tanks for a period not to exceed ninety (90) days. It may also be recycled and used for drilling, completion or fracing for another well or location. Excess water may be piped or trucked to disposal wells and/ trucked to a commercial disposal facility.

N) Sewage disposal facilities will be in accordance with State and Local Regulations. Sewage may not be buried on location or put in a borehole. Colorado Department of Public Health and Environmental (CDPHE) Regulations prevent this unless a CDPHE Permit is obtained.

O) Garbage and other waste - burnable waste will be contained in a portable trash cage which will be totally enclosed with small mesh wire. Cage and contents will be transported to and trash dumped at a CDPHE approved Sanitary Landfill upon completion of operations.

P) Trash will be picked up, if scattered, and contained in trash cage as soon as practical after rig is moved off.

Q) Upon release of the drilling rig, rathole and mousehole will be filled. Debris and equipment not required for production will be removed.

R) Any reportable spills of oil, gas, salt water or other potentially hazardous substances will be reported immediately to the BLM, and other responsible parties, and will be mitigated immediately, as appropriate, through clean up or removal to an approved disposal site.

Wellsite Layout

A) Roads and well production equipment, such as tanks, treaters, separators, vents, electrical boxes, and equipment associated with pipeline operation, will be placed on location so as to permit maximum interim reclamation of disturbed areas. If equipment is found to interfere with the proper interim reclamation of disturbed areas, the equipment may be moved so proper recontouring and revegetation can occur.

B) Six inches of topsoil will be removed prior to location construction from the reserve pit area and/or any other disturbed areas. Topsoil will be stockpiled adjacent to the wellsite within the maximum disturbed area shown on the wellsite plat.

C) Topsoil and spoils pile will be clearly separated as shown on Pad Layout.

D) Erosion control measures will be applied pursuant to Mesa's General Permit to Discharge Stormwater under the Colorado Pollutant Discharge Elimination System and accompanying Stormwater Management Plan.

E) To control drainage, the BMPs for this location are perimeter ditch/berm, cut slope diversion.

Reclamation

GENERAL

A) Salvaging and spreading topsoil will not be performed when the ground or topsoil is frozen or too wet to adequately support construction equipment.

B) Earthwork for interim and final reclamation must be completed within six (6) months of well completion or plugging (weather permitting).

C) In areas that will not be drill-seeded, the seed mix will be broadcast-seeded at twice the application rate shown.

D) Fall seeding is preferred and will be conducted after September 15 and prior to ground freezing. Spring seeding will be conducted after the frost leaves the ground.

E) Annual or noxious weeds shall be controlled on all disturbed areas as directed by the Field Office Manager. An intensive weed monitoring and control program will be implemented beginning the first growing season after interim and final reclamation. Noxious weeds that have been identified during monitoring will be promptly treated and controlled. A Pesticide Use Proposal (PUP) has been submitted to the BLM for approval prior to the use of herbicides. All reclamation equipment will be cleaned prior to use to reduce the potential for introduction of noxious weeds or other undesirable non-native species. The operator will coordinate all weed and insect control measures with state and/or local management agencies.

F) Reclaimed areas will be monitored annually. Actions will be taken to ensure that reclamation standards are met as quickly as reasonably practical.

G) Reclamation monitoring will be documented in a reclamation report and submitted to the WRFO.

H) The WRFO will be informed when reclamation has been completed, is successful, and the site is ready for final inspection.

INTERIM RESTORATION (Production)

A) Rehabilitation of unneeded, previously disturbed areas will consist of backfilling and contouring the reserve pit area, back sloping and contouring all cut & fill slopes. These areas will be re-seeded.

B) Wellpad size will be reduced to minimum size necessary to conduct safe operations. Cuts & fills will be reduced to 3:1 or shallower slope.

C) Reserve pits will be closed and backfilled as soon as the pit contents are dry enough to do so, or no later than the end of the next full summer following rig release, whichever comes first, to allow sufficient time for the pit contents to dry. Reserve pits remaining open after this period will require written authorization of the AO. Immediately upon well completion, any hydrocarbons or trash in the reserve and flare pits will be removed. Pits will be allowed to dry, be pumped dry or solidified in-situ prior to backfilling.

D) Following completion activities, pit liners will be removed or removed to the solids level and disposed of at an approved landfill, or treated to prevent their reemergence to the surface and interference with long-term successful revegetation. If it was necessary to line the pit with a synthetic liner, the pit will not be trenched (cut) or filled (squeezed) while containing fluids. When dry, the pit will be backfilled with a minimum of five (5) feet of soil material.

In relatively flat areas, the pit area will be slightly mounded to allow for settling and to promote surface drainage away from the backfilled pit.

E) The portions of the cleared well site not needed for operational and safety purposes will be re-contoured to the original contour if feasible, or if not feasible, to an interim contour that blends with the surrounding topography as much as possible. Sufficient level area will remain for setup of a workover rig and to park equipment. In some cases, rig anchors may need to be pulled and reset after re-contouring to allow for maximum interim reclamation.

F) Topsoil will be evenly re-spread and aggressively re-vegetated over the entire disturbed area not needed for all-weather operations including road cuts & fills and to within a few feet of the production facilities, unless an all-weather, surfaced, access route or small “teardrop” turnaround is needed on the wellpad.

G) Initial seedbed preparation will consist of backfilling, leveling, and ripping all compacted areas. Final seedbed preparation will consist of contour cultivating to a depth of 4” - 6” inches within 24 hours prior to seeding. Seeding will be conducted no more than 24 hours following completion of final seedbed preparation. A certified weed-free seed mix designed by BLM (shown below) to meet reclamation standards will be used. The seed mix will be used on all disturbed surfaces including pipelines and road cut & fill slopes.

H) To help mitigate the contrast of re-contoured slopes, reclamation will include measures to feather cleared lines of vegetation and to save and redistribute cleared trees, debris, and rock over re-contoured cut & fill slopes.

I) A proposed seed mixture for this location is BLM Native Seed Mix #3

J) Reclamation will be considered successful if the following criteria are met:

- 70% of pre-disturbance cover
- 90% dominate species*
- Erosion features equal to or less than surrounding area

*The vegetation will consist of species included in the seed mix and/or occurring in the surrounding natural vegetation.

K) To control drainage during interim reclamation some of the BMP’s for this pad include maintaining a bar ditch around the perimeter of the reclaimed pad with check dams.

FINAL RESTORATION (P & A – Removal of equipment)

A) Flowlines on location will be removed before site reclamation and all flowlines between the wellsite and production facilities will remain in place and will be filled with water.

B) If necessary to ensure timely revegetation, the pad will be fenced to BLM standards to exclude livestock grazing for the first two growing seasons or until seeded species become firmly established, whichever comes later. Fencing will meet standards found on page 18 of the Gold Book, 4th Edition, or will be fenced with operational electric fencing.

C) Revegetation will be accomplished by planting mixed grasses as specified below. Revegetation is recommended for road area as well as around production site.

D) A proposed seed mixture for this location is BLM Native Seed Mix #2 or #3

E) Initial seedbed preparation will consist of backfilling, leveling, and ripping all compacted areas. Final seedbed preparation will consist of contour cultivating to a depth of 4” to 6” within 24 hours prior to seeding. Seeding will be conducted no more than 24 hours following completion of final seedbed preparation. A certified weed-free seed mix designed by BLM (shown above) to meet reclamation standards will be used. The seed mix will be used on all disturbed surfaces including pipelines and road cut & fill slopes.

F) All disturbed areas, including roads, pipelines, pads, production facilities, and interim reclaimed areas will be re-contoured to the contour existing prior to initial construction or a contour that blends indistinguishably with the surrounding landscape. Re-salvaged topsoil will be spread evenly over the entire disturbed site to ensure successful revegetation. To help mitigate the contrast of re-contoured slopes, reclamation will include measures to feather cleared lines of vegetation and to save and redistribute cleared trees, woody debris, and large rocks over re-contoured cut & fill slopes.

G) At final reclamation all storm water management BMP’s for drainage, sediment and erosion will be removed in order to return the site to its natural state. All sediment will be managed through revegetation practices (seeding on contour, crimping straw on contour and/or erosion control hydro-mulch, pocking and topsoil distribution. Downgradient wattles will remain until vegetation establishment meets minimum requirements. Any stormwater management features utilized for final reclamation will be removed prior to FAN approval.

No Action Alternative: The APDs would be denied. Therefore, the wells would not be drilled, the pads and access roads would not be constructed, and the pipelines would not be installed.

ALTERNATIVES CONSIDERED BUT NOT CARRIED FORWARD: None.

PURPOSE & NEED FOR THE ACTION: The purpose of the proposed action is to manage the exploration and development of mineral resources on Public Lands in a manner that avoids, minimizes, reduces, or mitigates potential impacts to other resource values.

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

Decision to be Made: The BLM will decide whether or not to approve the APDs, and if so, under what conditions.

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 (ROD/RMP).

Date Approved: July 1, 1997

Decision Number/Page: 2-5

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

AFFECTED ENVIRONMENT / ENVIRONMENTAL CONSEQUENCES / MITIGATION MEASURES

STANDARDS FOR PUBLIC LAND HEALTH: In January 1997, Colorado Bureau of Land Management (BLM) approved the Standards for Public Land Health. These standards cover upland soils, riparian systems, plant and animal communities, threatened and endangered 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. These findings are located in specific elements listed below:

NATURAL, BIOLOGICAL, AND CULTURAL RESOURCES

AIR QUALITY

Affected Environment: The proposed action is located in rural northwest Colorado in the White River Basin, more than ten miles from special designation air sheds or non-attainment areas. Industrial facilities in White River Basin include coal mines, soda ash mines, natural gas processing plants and power plants. Due to these industrial uses, increased population and oil and gas development, emissions of air pollutants in the White River Basin due to exhaust and dust are likely to increase into the future. Despite increases in emissions, overall air quality conditions in the White River Basin are likely to continue to be good for some time due to effective atmospheric dispersion conditions and limited transport of air pollutants from outside the area.

Although specific air quality monitoring data are not available for the project area, data have been collected in the region. BLM recently established two air quality monitoring sites, one in Rangely and one in Meeker, that measure criteria pollutants, specifically ozone, dust and nitrogen oxides. The cities of Grand Junction (southwest), Steamboat Springs (northeast), Rifle (southeast) and Parachute (south) all host air quality monitoring stations. Available monitoring data at these stations indicate that the area is likely to be in the attainment category, meaning that

the ambient concentrations of criteria pollutants are less than the applicable air quality standards (National Ambient Air Quality Standards and (NAAQS) and Colorado Ambient Air Quality Standards (CAAQS)). However it should be noted, not all criteria pollutants have been monitored at each station and there is not continuous monitoring of all criteria pollutants at any of the stations. Also, differences in the atmospheric conditions, proximity to emissions, and climate at any of these monitoring sites can make data from these sites less relevant to the project's location.

The White River Basin and the nearby portions of the Colorado River Basin has been classified as either attainment or unclassified for all air pollutants (NAAQS and CAAQS standards), and most of the area has been designated for the prevention of significant deterioration (PSD) Class II. Because the historic air quality in the White River Basin has been good, small changes in air quality may have noticeable localized effects, especially on visibility.

Environmental Consequences of the Proposed Action: The proposed action includes building 2 well pads, drilling 2 wells, installation of pipelines, and the construction of access roads.

Construction of well pads involves removing top soil, constructing pads using cut and fill techniques, and installing stormwater BMPs. Building new access roads involves stripping the topsoil and windrowing it to the side, digging the barrow ditches and shaping the road crown, replacing the topsoil on cut/fill slopes and barrow ditches, and reclamation/stormwater control efforts. During these construction phases dust production is likely, especially when conditions are dry and/or windy. Once the wells go into interim reclamation all the roads should have the topsoil redistributed and stabilized and the pad should be recontoured and stabilized.

As vegetation establishes in the reclaimed areas, the only dust production that is likely is due to vehicles traveling on the access road and pads to service the wells. Therefore, dust production is most likely during drilling and construction activities. With maintaining roads to BLM Manual Section 9113 standards, as specified by the operator and, and with the application of dust suppressants, dust generation should be reduced, but will still occur on access roads during production and be more pronounced during dry and windy conditions. The applicant has indicated that they will use water as a dust suppressant as needed.

Soil disturbance resulting from construction, heavy equipment, and drill rigs is expected to cause increases in fugitive dust and inhalable particulate matter, specifically PM₁₀ and PM_{2.5}, in the project area and immediate vicinity. In addition, increases in the following criteria pollutants: carbon monoxide, ozone (secondary pollutant), nitrogen dioxide, and sulfur dioxide would also occur due to combustion of fossil fuels during installation activities. Non-criteria pollutants such as visibility, nitric oxide, air toxics (e.g. benzene) and total suspended particulates (TSP) may also experience slight, temporary increases as a result of the proposed action (no national ambient air quality standards have been set for non-criteria pollutants). Additional low, short-term impacts to air quality may occur due to venting of gas from the wells. Even with these increased pollutants, this project is unlikely to result in an exceedance of NAAQ and CAAQ standards and is likely to be under PSD thresholds.

Environmental Consequences of the No Action Alternative: No impacts would occur.

Mitigation: This item should be added as a condition of approval (COA) to reduce dust production:

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

SOILS

Affected Environment: The proposed action does not impact soils identified as fragile, with landslide potential and/or steep slopes. According to 10 meter Digital Elevation Model data there will not be any disturbance on slopes greater than 25%. The soil classifications of the soils that will be impacted by new construction for the pads, roads and pipelines are shown in the table below.

Soil Classifications (acres potentially impacted based on a 30m buffer)

Soil Classification	Range Site Description	Acres
Rentsac channery loam, 5-50% slopes	Pinyon Juniper Woodlands	14
Rentsac-Piceance complex, 2-30% slopes	PJ woodland/Rolling Loam	8

The soils for the 13-9-299 are mostly Rentsac-Piceance Complex soils and they have a moderate to high erosion hazard. This site is also at the head of a drainage that drops off to the northwest of the pad. The soils for 14-9-299 are Rentsac channery loam soils and these soils have sandstone rock fragments mixed in with soils near the surface and have a moderate to very high erosion potential. The area for 14-9-299 is relatively flat and therefore the erosion hazard is probably moderate and not very high at this location.

Environmental Consequences of the Proposed Action: Potential impacts to soils from the proposed action include removal of vegetation, mixing of soil horizons, soil compaction, increased susceptibility to erosion, loss of topsoil productivity and contamination of soils with petroleum constituents. If reclamation is successful and spills are contained and cleaned up, impacts from this project will be minor and localized to disturbed areas of approximately 24 acres. Impacts could become severe if drilling and construction activities continue when soils are saturated or erosion resulting from the project continues without being addressed by BMPs.

The construction of the access roads, well pads and pipeline installation would result in the loss of vegetative cover, increasing the potential for water erosion and soil loss during excavation. Compaction due to construction activities would reduce aeration, permeability and water-holding

capacities of the soils. An increase in surface run-off could be expected from these areas, potentially causing increased sheet, rill and gully erosion. Decreased soil productivity as a result of the loss of topsoil has the potential to hinder revegetation efforts and leave soils further exposed to erosional processes. Grading, trenching, and backfilling activities may cause mixing of the soil horizons, which could diminish soil fertility, reducing the potential for successful revegetation. Segregation and reapplication of surface soils would result in the mixing of shallow soil horizons, resulting in a blending of soil characteristics and types. This blending would modify physical characteristics of the soils, including structure, texture and rock content, which could lead to reduced permeability and increased runoff from these areas.

The primary effect of surface disturbances on soil resources is in increasing erosion. Increased erosion of soils would also directly reduce vegetative productivity. Erosion potential for the soil types that would be disturbed in the project area ranges from moderate to high. If the seedbed is not stabilized, revegetation efforts will not be successful and erosion could occur.

Contamination of surface and subsurface soils can occur from leaks or spills of oil, produced water, and condensate liquids from wellheads, produced water sumps and condensate storage tanks. Leaks or spills of drilling and hydraulic fracturing chemicals, fuels and lubricants could also result in soil contamination. Such leaks or spills could compromise the productivity of the affected soils. Of these materials, leaks or spills of condensate would have the greatest potential environmental impact. Depending on the size and type of spill, the impact to soils would primarily consist of the loss of soil productivity. Typically, contaminated soils would be removed and disposed of in a permitted facility or would be bioremediated in place using techniques such as excavating and mulching to increase biotic activities that would break down petrochemicals into inert and/or common organic compounds.

Environmental Consequences of the No Action Alternative: No impacts to soils would likely occur.

Mitigation: The following should be attached as COAs:

- 1) The SUPO for the wells indicates that the newly constructed road sections will bury the topsoil in the crown of the road during construction. Because this is poor practice, the proponent shall instead remove the topsoil and windrow it to the side; build the road shape using subsoil with borrow material from the ditches; and finally replace and seed the topsoil on stable locations within the borrow area.
- 2) All construction and drilling activity shall cease when soils or road surfaces become saturated to a depth of three inches unless there are safety concerns or if activities are otherwise approved by the AO.
- 3) 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 AO and submitting a plan to assure successful soil stabilization with BMPs to address erosion problems.

Finding on the Public Land Health Standard for upland soils: With mitigation this action is unlikely to reduce the productivity of soils impacted by surface disturbing activities, thus land health standards are likely to be met.

WASTES, HAZARDOUS OR SOLID

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. The operator does not identify in their APD submissions any hazardous substances to be used during operations associated with this project.

Most of the exploration and production wastes generated during the proposed action would be exempt from the Resource Conservation and Recovery Act (RCRA) hazardous waste regulations (e.g., produced water, produced oil) due to the exception for oil and gas exploration and development activities. However, the exemption does not mean that these wastes present no hazard to human health and the environment, nor would the exemption relieve the operator from corrective action to address releases of exempt wastes. Non-exempt wastes such as lubricants, fuels, caustics or acids, and other chemicals would be used during exploration and production activities and solid waste (e.g., human waste, garbage, etc.) would be generated during the proposed activities. The operator has not specified the chemicals that would be used for drilling, completion, and hydraulic fracturing. Potential environmental impacts from these hydraulic fracturing agents are not well known.

Garbage would be contained onsite in fenced trash containers and then hauled to an approved disposal site. Sewage from trailer houses would be held in holding tanks and transported to an approved sewage disposal facility.

Environmental Consequences of the Proposed Action: No listed or extremely hazardous materials in excess of threshold quantities are proposed for use in this project. While commercial preparations of fuels and lubricants proposed for use may contain some hazardous constituents, they would be stored, used, and transported in a manner consistent with applicable laws such that generation of hazardous wastes is not anticipated. All left-over chemicals and materials would be hauled off-site for use or disposal. Solid wastes would be properly disposed of off-site at an approved facility.

Accidental releases associated with equipment failures, equipment maintenance and refueling, and storage of fuel, oil, other fluids, and chemicals could cause soil, surface water, and/or groundwater contamination. Improper management of pit contents may also contribute to environmental contamination. Releases of produced water would present widespread impacts. The high salinity of produced water may affect plant growth due to the high osmotic pressure of the soil solution, and impact groundwater or surface water through leaching or run-off. The sodicity (i.e., excess sodium) of produced water causes deterioration of the soil structure, thereby increasing the potential for soil erosion. Leaks of produced water, condensate, and/or natural gas present potential for chronic exposure of potentially hazardous chemical to proximate plants, wildlife, livestock, or people if the fluids encounter ground or surface water. With

implementation of the mitigation measures and the Spill Prevention, Control, and Countermeasure (SPCC) Plan described below, impacts would likely be temporary.

Since chemicals that would be used on the site have not been disclosed (specifically chemicals or other additives used for drilling, completion and hydraulic fracturing operations), impacts of unknown severity may occur to groundwater. With proper well completion, impacts between aquifers of varying water quality could potentially occur, but is unlikely due to the vertical displacement of freshwater and the production zones.

Environmental Consequences of the No Action Alternative: No hazardous or other solid wastes would be generated, and no accidental release of substances with hazardous or toxic characteristics could be released.

Mitigation: The following items should be added as COAs:

- 1) Comply with all Federal, State and/or local laws and regulations 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.
- 2) Employ, maintain, and periodically update to the best available technology(s) aimed at reducing emissions and hazardous material utilization, production and releases through all phases of oil and gas exploration, development, and production.
- 3) All substances that pose a risk of harm to human health or the environment shall be stored in appropriate containers. Fluids that pose a risk of harm to human health or the environment, including but not limited to produced water, shall be stored in appropriate containers and in secondary containment systems at 110% of the largest vessel's capacity. Secondary fluid containment systems, including but not limited to tank batteries shall be lined with a minimum 24 mil impermeable liner.
- 4) The operator shall submit an updated Spill Prevention Control and Countermeasures Plan (SPCCP) and an updated spill/release contingency plan to the WRFO prior to engaging in construction activities.
- 5) Construction sites and all facilities shall be maintained in a sanitary condition at all times; waste materials shall be disposed of promptly at an appropriate waste disposal site. "Waste" means all discarded matter including, but not limited to, human waste, trash, garbage, refuse, oil drums, petroleum products, ashes, and equipment.
- 6) In addition to compliance with the reporting requirements of Notice to Lessee's-#3A and regardless of a substance's status as exempt or non-exempt, report all emissions or releases of any quantity of any substance that may pose a risk of harm to human health or the environment to the WRFO at (970) 878-3800.
- 7) Regardless of a substance's status as exempt or non-exempt and regardless of fault, 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. Where the lessee/operator fails, refuses or neglects to provide for the immediate clean-up and testing of air, water (surface and/or

ground) and soils contaminated by the emission or release of any quantity of a substance that poses a risk of harm to human health or the environment, the WRFO may take measures to clean-up and test air, water (surface and/or ground) and soils at the lessee/operator's expense. Such action shall not relieve the lessee/operator of any liability or responsibility.

- 8) With the acceptance of this authorization, the commencement of operations, or the running of thirty calendar days from its issuance, whichever occurs first, and during oil and gas exploration, development and production under this authorization, the operator, and through the operator, its agents, employees, subcontractors, successors and assigns, stipulates and agrees to indemnify, defend and hold harmless the United States Government, its agencies, and employees from all liability associated with the emission or release of substances that pose a risk to human health or the environment.

WATER QUALITY, SURFACE AND GROUND (includes a finding on Standard 5)

Affected Environment: Surface Water: This project is located in Stake Springs Gulch and drains into the Yellow Creek drainage and then into the White River. The following water segments may be impacted by this project:

Water Quality Classification Table*

Segment	Segment Name	Protected Beneficial Uses		
		Aquatic Life	Recreation	Agriculture
13b	Mainstem of Yellow Creek to the confluence with Barcus Creek and all tributaries to Yellow Creek from the source to the White River	Warm 2	Non-Contact Recreation	Yes

* Colorado Department Of Public Health And Environment, Water Quality Control Commission, Regulation No. 37 Classifications and Numeric Standards For Lower Colorado River Basin, Effective June 30, 2010

The mainstem of Yellow Creek is protected for warm water aquatic life (Warm 2). The warm designation means the classification standards would be protective of aquatic life normally found in waters where the summer weekly average temperature frequently exceeds 20 °C. The Warm 2 designation means that it has been determined that these waters are not capable of sustaining a wide variety of warm water biota. These waters would also have standards that are protective from primary contact recreation and agriculture.

Groundwater: The project area is located in an area of recharge for the Yellow Creek. Precipitation in this area generally moves from areas of recharge in surface waters and in shallow groundwater during spring melt. A portion of annual precipitation infiltrates to deeper bedrock aquifers that contribute to contact springs. Groundwater occurs in both bedrock and alluvial aquifers beneath Yellow Creek and its tributaries along valley bottoms and are comprised of unconsolidated sand, gravel, silt, and clay.

Contact springs are common in the area and are often the result of upper bedrock aquifers consisting of fractured, lean oil shales and siltstones of the Green River formation above and below the Mahogany Zone or from fractured marlstone of the saturated portion of the overlying Uinta Formation. The permeability of these sediments can vary dramatically vertically and horizontally thereby resulting in variable porosity and piping that forms groundwater springs. There are productive water zones in the Upper Parachute Creek Group in the Green River Formation sandwiching the Mahogany, called the A-groove and B-groove with the B-groove below the Mahogany. These groundwater zones are characterized by high horizontal conductivity. In general, the B-groove has higher salinity than the A-groove. Dramatic changes in pressure or porosity due to leached mineral zones can cause drilling fluids to be “lost” to the formation. Leached mineral zones contain features such as fractures and solution cavities. Contact springs associated with the A and B groove aquifers in the Upper Parachute Group may have higher than normal horizontal transmissivity from their recharge zones and it is not uncommon to have less than a year or in some cases less than a week movement of shallow groundwater to the surface via fractures faults, and depleted pore space in bedrock materials. Therefore contamination from surface sources or shallow groundwater can quickly be transported to surface waters in this area.

Perched groundwater zones occur locally within the Uinta Formation. These perched zones can occur in the ridges between surface water drainages and may be manifested as springs and seeps above the valley floor in outcrop areas. Recharge areas for most of these springs and groundwater zones is on the top of the Douglas Plateau and Roan Cliffs, to the south of the project area.

Environmental Consequences of the Proposed Action: The proposed action includes building 2 well pads, drilling 2 wells, installation of pipelines, and the construction of access roads. The construction of pads will involve removing top soil, earthwork, reclamation and installing stormwater BMPs. Building the new access roads will involve stripping the topsoil and windrowing it to the side, digging the barrow ditches and shaping the road crown, replacing the topsoil on cut/fill slopes and barrow ditches, reclamation and stormwater control efforts.

Surface Waters: Clearing, grading, and soil stockpiling activities associated with the proposed action would alter overland flow and natural groundwater recharge patterns. Almost 24 acres would be disturbed to construct the proposed facilities, in which vegetation would be removed. Potential impacts include surface soil compaction caused by construction equipment and vehicles, which would likely reduce the soil’s ability to absorb water, increasing the volume and rate of surface runoff, which in turn would cause increased surface erosion.

This project is in the headwaters of Stake Springs Gulch an ephemeral tributary to Yellow Creek, therefore impacts to surface waters would be during storm events or due to changes in groundwater. Runoff associated with storm events may increase sediment/salt loads in surface waters down gradient of the disturbed areas. Sediment may be deposited and stored in minor drainages where it would be readily moved downstream during heavy convection storms. Some sediment from project activities may eventually be carried into Yellow Creek and ultimately to the White River. The distance to the White River would have an attenuating effect on the amount of sediment contributed by project activities to the river. Surface erosion would be

greatest during the construction and early production phases of the project and would be controlled using BMPs for stormwater. It is unlikely this increase in sedimentation would be measurable in the White River.

The magnitude of the impacts to surface water resources from project activities depends on the proximity of the disturbance to drainage channels, slope aspect and gradient, degree and area of soil disturbance, soil character, duration of construction activities, and the timely implementation and success/failure of mitigation measures. Natural factors which attenuate the transport of sediment into creeks include water available for overland flow; the texture of the eroded material; the amount and kind of ground cover; the slope shape, gradient, and length; and surface roughness. These pads are located in relatively flat terrain (less than 25% slopes) and on top of a ridge, therefore impacts are not likely from these activities to surface waters.

Impacts should they occur, would likely be greatest shortly after the start of construction activities and would likely decrease in time due to stabilization, reclamation, and revegetation efforts. Changes in surface hydrology from road construction would continue through the life of the project and may extend beyond the project life if roads are left in place. Successful reclamation and proper road design would go a long way towards reducing indirect impacts, especially after active construction and drilling activities are completed and interim reclamation is completed on the pad.

Groundwater: Known water bearing zones in the project area are generally above the Wasatch Formation. These include the contact springs, perched aquifers and groundwater zones described in the Affected Environment. Proposed surface casing would be below the top of the Wasatch Formation, thus ensuring continued integrity and functionality of the groundwater resources identified. If a surface casing fails, circulation is lost and/or cementing is poor, there is a potential for commingling of drilling water with waters from the upper and lower aquifers, or cross contamination of groundwater zones. The commingling of such water could result in localized contamination of aquifers from more saline waters in deeper formations. With proper drilling and completion practices, mixing of lower aquifers with the upper or alluvial aquifers and the contamination of groundwater resources is unlikely.

Environmental Consequences of the No Action Alternative: No impacts identified.

Mitigation: The following should be attached as COAs:

- 1) Locate culverts or drainage dips in such a manner as to avoid discharge onto unstable terrain such as headwalls or slumps. Provide adequate spacing to avoid accumulation of water in ditches or road surfaces. Install culverts with adequate armoring of inlet and outlet. Patrol areas susceptible to road or watershed damage during periods of high runoff.
- 2) Keep road inlet and outlet ditches, catchbasins, and culverts free of obstructions, particularly before and during spring run-off. Routine machine-cleaning of ditches should be kept to a minimum during wet weather. Leave the disturbed area in a condition that provides drainage with no additional maintenance.

- 3) Culverts and waterbars should be installed according to BLM Manual 9113 standards and sized for the 10-year storm event with no static head and to pass a 25-year event without failing.
- 4) Pursuant to OSO # 7, a permanent disposal method for produced water must be approved by BLM and in operation 90 days after well completion.

Finding on the Public Land Health Standard for water quality: It is unlikely that the access road and well pad construction, as well as drilling and production activities would result in an exceedence of state water quality standards. Cumulative impacts from this activity and others may eventually impact sediment yields to the degree that they impact listing of Yellow Creek on the 303d list of Impaired Waters.

WETLANDS AND RIPARIAN ZONES (includes a finding on Standard 2)

Affected Environment: Pad 13-9-299 is situated in a slight saddle immediately adjacent to an unnumbered BLM road. This location is separated from privately-owned reaches of Stake Springs Draw, an intermittent system, by approximately 1.5 miles of ephemeral channel. The nearest BLM administered reach is located nearly three channel miles downstream from this site. Pad 14-9-299 is situated slightly off a narrow ridge top. This location is separated from privately-owned portions of Stake Springs Draw by 0.50 miles of ephemeral channel, with the nearest publicly-owned reach roughly 3 miles downstream. The Stake Springs system supports low densities of riparian obligates including: sedge, bulrush and spike rush.

Environmental Consequences of the Proposed Action: Construction of the proposed well pads and associated access roads and pipelines would have no direct impact on riparian habitats. With the application of BMPs associated with soil erosion there is no reasonable likelihood that fugitive sediments would have any influence on the function or condition of the Stake Springs channel or its associated riparian characteristics.

Environmental Consequences of the No Action Alternative: There would be no action authorized that would have any direct or indirect influence on downstream riparian habitats.

Mitigation: None

Finding on the Public Land Health Standard for riparian systems: The nearest BLM administered reach is located approximately three miles from the proposed locations. Neither the proposed nor the no action alternative would have any reasonable potential to influence the function or condition of the Stake Springs channel or its riparian values.

VEGETATION (includes a finding on Standard 3)

Affected Environment: Proposed BDU 13-9-299 is located within a mixed Pinyon Juniper woodland and Rolling Loam ecological site. Vegetation cover of this site is comprised

primarily of Pinyon/Juniper woodland, Wyoming big sagebrush, and Bitterbrush with an understory of perennial grasses including Western wheatgrass and Junegrass. Proposed 14-9-299 site is located within a Pinyon/Juniper woodland site shrub cover consists of Wyoming big sagebrush, Bitterbrush, Rabbitbrush, and Mountain Mahogany. Perennial grass species in the understory include Western wheatgrass and Junegrass.

Environmental Consequences of the Proposed Action: The proposed action would impact approximately 24 acres. The principal impact to vegetation would be complete removal of vegetation on the locations, access roads, and pipelines and the earthen disturbance associated with it. In terms of plant community composition, structure, and function, the principal impact over the long term would occur if cheatgrass or noxious weeds are allowed to establish and proliferate on the disturbed areas resulting from pipeline and access road construction. If revegetation is prompt and effective, there likely would be no long term negative impact.

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

Mitigation: The operator shall adhere to measures regarding reclamation presented in the SUPO which has been incorporated into the proposed action of this document. In addition the following should be attached as conditions of approval:

1. Promptly revegetate all disturbed areas with Native Seed Mix #3 listed below. Woody debris shall not be scattered pipelines until **after** seeding operations are completed. Seed mixture rates are Pure Live Seed (PLS) pounds per acre. Drill seeding is the preferred method of application

Native Seed Mix #3		
Western wheatgrass (Rosanna)	2	Gravelly 10"-14", Pinyon/Juniper Woodland, Stony Foothills, 147 (Mountain Mahogany)
Beardless wheatgrass (Whitmar)	2	
Thickspike wheatgrass (Critana)	1	
Indian ricegrass (Rimrock,)	2	
Alternates: Needle and thread, globemallow		

2. 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 sundry will include the purpose of the seeding activity (i.e., seeding well pad cut and fill slopes, seeding pipeline corridor, etc.). In addition, the SN will include the well or well pad number associated with the seeding activity, if applicable, the name of the contractor that performed the work, his or her phone number, the method used to apply the seed (e.g., broadcast, hydro-seeded, drilled), whether the seeding activity represents interim or final reclamation, an estimate of the total acres seeded, an attached map that clearly identifies all disturbed areas that were seeded, and the date the seed was applied.

Finding on the Public Land Health Standard for plant and animal communities (partial, see also Wildlife, Aquatic and Wildlife, Terrestrial): Upland plant communities in the project area currently meet the Standard and are expected to meet the Standard in the future following project implementation.

INVASIVE, NON-NATIVE SPECIES

Affected Environment: There are no known noxious weeds at or in the vicinity of the proposed action(s). The invasive alien cheatgrass (*Bromus tectorum*) is present in the project area in areas of unvegetated earthen disturbance in association with roads, pipelines, and well locations.

Environmental Consequences of the Proposed Action: The proposed action would create about 23.58 acres of new earthen disturbance; which if it is not revegetated with desirable species and /or treated with herbicides to eradicate invasive, non-native species, would be invaded and dominated by undesirable species, increasing the potential for fire and the consequent further proliferation of cheatgrass. Noxious weeds could also spread from the project sites to surrounding native rangelands resulting in a long term negative impact. The resulting increase of noxious weeds/cheatgrass could perpetuate a downward cycle of environmental degradation that would be largely irreversible. There would be a low likelihood of long term negative impact if the proposed mitigation is properly implemented.

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

Mitigation: The operator shall adhere to measures regarding reclamation presented in the SUPO which has been incorporated into the proposed action of this document.

THREATENED, ENDANGERED, AND SENSITIVE PLANT SPECIES (includes a finding on Standard 4)

Affected Environment: There are no plant species listed, proposed, or candidate to the Endangered Species Act, or plants considered sensitive by the BLM, that are known to inhabit areas influenced by the proposed action.

Environmental Consequences of the Proposed Action: The proposed action is not expected to affect special status plant species or associated habitats.

Environmental Consequences of the No Action Alternative: The no action alternative is not expected to affect special status plant species or associated habitats.

Mitigation: None

Finding on the Public Land Health Standard for Threatened & Endangered species: The proposed and no-action alternatives are not expected to affect populations or habitats of plants associated with the Endangered Species Act or BLM sensitive species and, as such, should have no influence on the status of applicable Land Health Standards.

THREATENED, ENDANGERED, AND SENSITIVE ANIMAL SPECIES (includes a finding on Standard 4)

Affected Environment: There are no animals listed, proposed or candidate to the Endangered Species Act that are known to inhabit or derive important use from the project area. Piñon-juniper woodlands surrounding both locations have extremely limited potential to provide habitat for northern goshawk, a BLM-sensitive species. Goshawks are a relatively rare resident in the White River Resource Area. In general this species prefers to nest in contiguous aspen stands, or spruce-fir/aspen mix stands. Within the last several decades however, approximately half a dozen nests have been found in low to mid elevation piñon-juniper woodlands throughout the Piceance Basin. A raptor survey was conducted by WestWater Engineering (WWE 2010) during July 2010. No active goshawk nests were observed within the vicinity of the project area. The nearest known goshawk nest is over a dozen miles from the project area.

Both piñon species and juniper species may also provide potential roost sites for Townsend's big-eared bat as well as fringed and Yuma myotis, all BLM-sensitive species. The overall abundance of bats in the project area is likely constrained by the paucity of maternity and hibernation roost habitat that could be expected to harbor larger numbers of bats (e.g., caves, mines, buildings) and use of the project area is likely limited to the support of small numbers of non-breeding animals during the summer months.

See discussion on BLM-sensitive aquatic species in Aquatic Wildlife section.

Environmental Consequences of the Proposed Action: See discussion regarding woodland raptors in Terrestrial Wildlife section.

Environmental Consequences of the No Action Alternative: There would be no direct or indirect influence on special status species.

Mitigation: See mitigation regarding woodland raptors in Terrestrial Wildlife section.

Finding on the Public Land Health Standard for Threatened & Endangered species: The area potentially influenced by the proposed and no action alternatives does not currently support habitats associated with listed animal species, therefore, neither alternative would influence the applicable rangeland health standards. The project area currently meets applicable land health standards for sensitive animal species at the landscape scale. Neither the proposed nor the no action alternative would detract from the continued meeting of these standards.

MIGRATORY BIRDS

Affected Environment: Pad 13-9-299 sits in a slight saddle, down slope from a narrow ridge top. The northeastern side of the pad lies immediately adjacent to an unnumbered BLM road. This location is broadly encompassed by mixed-aged piñon-juniper woodlands. Wyoming big sagebrush is scattered throughout the site, with a well intact herbaceous understory largely comprised of perennial grasses.

Pad 14-9-299 is situated just off the western edge of a narrow ridge line. This location and its associated access road are situated in an immature piñon-juniper stand; the woodlands surrounding the site, however, exhibit more mature characteristics. The understory is sparse (considerable amount of bare ground), but well intact with a strong perennial grass and Wyoming big sagebrush component.

These mid elevation (6900 – 7000 ft) piñon-juniper communities provide suitable nesting habitat for many species of migratory birds during the breeding season (May 15 – July 15) including: black-throated gray warbler, Bewick's wren, dusky flycatcher and gray flycatcher. The only Birds of Conservation Concern (BOCC; designated regionally by the US Fish and Wildlife Service (USFWS) for long-term declining population trends) within the project area is juniper titmouse.

Although these locations have no open water or wetland areas that support or attract waterfowl use, 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: Construction of both well pads and associated access roads (both new construction and upgrades) and pipelines would directly remove nearly 20 acres of predominately piñon-juniper woodlands. Under natural succession regimes this community type could take, at a minimum, several hundred years to return to preconstruction conditions.

Indirectly the proposed action could impact an additional 50 acres (associated mainly with pad and new access road development) of functional forage and cover resources due to reductions in nest densities and avoidance of habitats associated with increased human activity, vehicle traffic and construction activities. Pipeline installation and road upgrades would likely have less of an impact as nest densities generally tend to be reduced adjacent to existing corridors/disturbances.

Should pad construction take place during the migratory bird nesting season (generally May 15 – July 15), there would be greater chance of displacement of birds, nest abandonment and potential mortality (mainly of nestlings). Based on breeding bird densities in the White River Resource Area, the proposed action has the potential to displace up to 30 nesting pair, which likely would be more generalized species, but may include some species of higher concern. Discussions with Mesa Energy personnel took place at the onsite (conducted 4/22/10) where it was agreed upon that in an effort to minimize displacement and nest loss/abandonment, all earthwork (vegetation removal) associated with development of both pad locations and construction of new access roads associated with the 14-9-299 site would take place outside of the migratory bird nesting period (May 15 – July 15).

It has been brought to BLM's attention that in certain situations migratory waterfowl have contacted drilling or frac fluids (i.e., stored in reserve pits) during or after completion operations and are suffering mortality in violation of the Migratory Bird Treaty Act (MBTA). 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.

Environmental Consequences of the No Action Alternative: There would be no conceivable influence on migratory birds.

Mitigation: The following items should be added as COAs:

- 1) The operator shall prevent use by migratory birds of reserve pits that store or are expected to store fluids which may pose a risk to such birds (e.g., migratory waterfowl, shorebirds, wading birds and raptors) during completion and after completion activities have ceased. Methods may include netting or other alternative methods that effectively prevent use and that meet BLM approval. It will be the responsibility of the operator to notify the BLM of the method that will be used to prevent use two weeks prior to when completion activities are expected to begin. The BLM approved method will be applied within 24 hours after completion.
- 2) All earthwork (vegetation removal) associated with development of both pad locations and construction of new access roads (associated with the 14-9-299 site) will take place outside of the migratory bird nesting season (May 15 – July 15).

WILDLIFE, AQUATIC (includes a finding on Standard 3)

Affected Environment: The nearest system supporting higher-order aquatic vertebrate populations is Yellow Creek. The lower reaches of this system (below Barcus Creek) provide habitat for native fish species such as speckled dace and mountain sucker, a BLM sensitive species. Fish populations have not been documented above the Barcus Creek confluence. Northern leopard frog, another BLM sensitive species have also been documented along the lower reaches of Yellow Creek. The proposed pad locations are separated by nearly 20 channel miles from lower portions of Yellow Creek

Environmental Consequences of the Proposed Action: Construction of the proposed well locations and associated access roads and pipelines would have no direct impact on aquatic resources. With the application of BMPs associated with soil erosion there is no reasonable likelihood that fugitive sediments would have any influence on the function or condition of the Yellow Creek channel, its aquatic wildlife or associated habitats.

Environmental Consequences of the No Action Alternative: There would be no direct or indirect influence on downstream aquatic habitat.

Mitigation: None

Finding on the Public Land Health Standard for plant and animal communities (partial, see also Vegetation and Wildlife, Terrestrial): The nearest reach supporting aquatic wildlife is nearly 20

miles downstream from the project area. Neither the proposed nor the no action alternative would have any reasonable potential to influence the function or condition of the Yellow Creek channel or its aquatic habitat values.

WILDLIFE, TERRESTRIAL (includes a finding on Standard 3)

Affected Environment: The mid elevation (~7000 ft) piñon-juniper woodlands that encompass the project area are categorized by the Colorado Division of Wildlife (CDOW) as big game general winter range. These ranges are most heavily used by big game from early October through mid-January then again from April to mid-May.

Piñon-juniper woodlands surrounding both locations may potentially provide habitat for woodland raptors. At the onsite conducted April 22, 2010, Mesa Energy agreed to move the original 13-9-299 pad location roughly 250 meters upslope (to the southeast), thus avoiding a mature stand of piñon-juniper, which is often favored for nesting by woodland raptors. The new location now proposed for this site involves younger, more even-aged woodlands that generally do not provide suitable nest substrate. Piñon-juniper woodlands that would be directly involved due to the construction of the 14-9-299 location are largely immature; mature woodlands are, however, common adjacent to this location. There are no cliffs or rock outcrops associated with either location.

A raptor survey was conducted by WWE in July 2010 (WWE 2010). Three active nests (1 Cooper's hawk and 2 long-eared owl) were located between 0.13 and 0.26 miles of well pad 14-9-299. No nests were observed within the vicinity of the 13-9-299 site.

Small mammal populations are poorly documented. However, the 20 or so species that are likely to occur in this area are widely distributed and display broad ecological tolerance throughout the Great Basin or Rocky Mountain regions. It is likely that the small mammal community associated with the project area is represented by relatively few generalized species, such as deer mouse and least chipmunk. No narrowly distributed or highly specialized species or sub-specific populations are known to occur in the project area.

Environmental Consequences of the Proposed Action: The proposed action would directly remove nearly 20 acres of predominately piñon-juniper woodlands. This community type provides forage, nesting and cover resources for big game and non-game species alike. Under natural succession regimes these woodlands would take a minimum of several hundred years to return to preconstruction conditions following reclamation. Timely and effective interim reclamation on the pads and pipelines are important to help offset herbaceous forage losses and accelerate the reestablishment of woody forage and cover components for all resident wildlife. It is suspected that once the completion phase has ended wildlife would make greater use of the area.

Pad development outside the raptor breeding season (February 1 – August 15) would have little to no potential to directly impact raptor nesting activities. Should pad development be delayed until the 2011 breeding season, a raptor survey (spot-check of existing nests) will be required for

the 14-9-299 location. Results will be submitted to the BLM wildlife staff prior to construction initiation. Should an active nest be located, appropriate timing restrictions shall be applied.

Environmental Consequences of the No Action Alternative: There would be no direct or indirect influence on terrestrial wildlife or associated habitats.

Mitigation: The following items should be added as COAs:

- 1) Should construction be delayed into the 2011 breeding season, a raptor survey (spot-check of existing nests) will be required and results provided to BLM staff biologists prior to construction. All raptor surveys will be performed following methods and procedures described in the WRFO Diurnal Raptor Survey Protocol. The third-party contractor responsible for conducting raptor surveys associated with the proposed action will contact the WRFO and request the most current version of the WRFO Diurnal Raptor Survey Protocol prior to performing surveys. Should an active nest be located, no development activities will be allowed within ¼ - ½ mile (depending on species) of the identified nest site from February 1 through August 15 or until young have fledged and dispersed from the nest stand (TL-01 and 04 WRFO ROD). No surface occupancy would be allowed within 1/8 - ¼ mile (depending on species) of identified nests (NSO-02 and 03 WRFO ROD).
- 2) All raptor nests (e.g., stick-built structures, nest cavities, eyries), regardless of their breeding or non-breeding season status, are to be reported to WRFO Natural Resource Specialist, Brett Smithers (see contact information below) via phone (970-878-3818) or by email (preferred; brett_smithers@blm.gov) within 24 hrs of the observation. Please provide the following when reporting nests: 1) the species observed using the nest; 2) UTM coordinates for the nest (recorded in NAD83, Zone 12); 3) date nest was first documented; 4) brief summary describing adult and/or juvenile behavior, number of nestlings observed, etc.; and, 5) relevant project information (e.g., project name and NEPA document number, if known) .

Finding on the Public Land Health Standard for plant and animal communities (partial, see also Vegetation and Wildlife, Aquatic): Overall, the project area meets the land health standards on a landscape scale. The proposed action is expected to incrementally reduce local habitat capacity over the life of the project. As conditioned by reclamation-related provisions, implementation of the proposed action would not interfere with continued landscape level maintenance of the land health standards.

CULTURAL RESOURCES

Affected Environment: Proposed BDU 13-9-299 well pad, access routes and well tie pipelines. The proposed well pad, access and well tie pipelines have been inventoried at the Class III (100% pedestrian) level (Conner and Darnell 2010) with one register eligible site located north of the pad along the access route and well tie route. There are no other known cultural resources within 308 meters of the project construction area.

Proposed BDU 14-9-299 well pad, access routes and well tie pipelines. The proposed well pad, access and well tie pipelines have been inventoried at the Class III (100% pedestrian) level (Conner and Darnell 2010). Two sites and one isolated find (IF) were located in the forty acre well pad inventory area. The IF is not considered eligible under the regulations. However, there is inadequate information to make an informed determination of the significance of the two sites due to the limited nature of the surface manifestation.

Environmental Consequences of the Proposed Action: For the proposed BDU 13-9-299 well pad, access routes and well tie pipelines, if mitigation measures are strictly adhered to there should be no new impacts to any known, significant cultural resources. There may be a small potential for previously unknown subsurface resources which could be impacted during construction.

For the proposed BDU 14-9-299 well pad, access routes and well tie pipelines, the proposed action has the potential to affect one known cultural resource and one suspected cultural resource. It is unknown at this time if the resources are truly significant or not. If mitigation measures are strictly adhered to it is possible that there would be no adverse impacts to significant cultural resources.

Environmental Consequences of the No Action Alternative: There would be no new impacts to cultural resources.

Mitigation: Common mitigation for both of the well pad, access routes and well tie pipelines:

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

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

- 2) Pursuant to 43 CFR 10.4(g) the holder of this authorization must notify the AO, by

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

Mitigation specific to the proposed BDU 13-9-299 well pad, access routes and well tie pipelines:

- 3) All disturbances associated with access and well tie pipeline construction north of the well pad must remain on the east side of the existing disturbance to avoid site 5RB5609.
- 4) A monitor shall be present at all times during construction work in the vicinity of the site to ensure it is avoided.

Mitigation specific to the proposed BDU 14-9-299 well pad, access routes and well tie pipelines:

- 5) The well center stake must be moved at least 15 meters south to minimize the potential to impact sites 5RB6640 and 5RB6641.
- 6) A monitor shall be present during all vegetation clearing and pad leveling to ensure previously unknown subsurface features, if any exist, are identified in the vicinity of the two sites.

PALEONTOLOGY

Affected Environment: The proposed 13-9-299 well pad and access route and well tie routes: The well pad, access route and well tie pipeline are in an area generally mapped as the Uinta Formation (Tweto 1979) which the BLM, WRFO has classified as a PFYC 5 formation meaning it is known to produce scientifically noteworthy fossils (Armstrong and Wolny 1989).

The proposed 14-9-299 well pad, access route and well tie pipeline: The well pad, access route and well tie pipeline are in an area generally mapped as the Uinta Formation (Tweto 1979) which the BLM, WRFO has classified as a PFYC 5 formation meaning it is known to produce scientifically noteworthy fossil resources. (Armstrong and Wolny 1989)

Environmental Consequences of the Proposed Action: The proposed 13-9-299 pad, access and well tie pipeline routes: If it should become necessary to excavate into the underlying rock formation to level the pad, excavate any pits, or bury the well tie pipeline, or construct the access road there is a potential to impact scientifically noteworthy fossils.

The proposed 14-9-299 pad, access and well tie pipeline routes: If it should become necessary to excavate into the underlying rock formation to level the pad, excavate the any pits, or bury the well tie pipeline, or construct the access road there is a potential to impact scientifically noteworthy fossils.

Environmental Consequences of the No Action Alternative: There would be no new impacts.

Mitigation: The following items should be added as COAs:

- 1) The operator is responsible for informing all persons who are associated with the project operations that they will be subject to prosecution for knowingly disturbing paleontological sites, or for collecting fossils. If fossil materials are uncovered during any project or construction activities, the operator is to immediately stop activities in the immediate area of the find that might further disturb such materials, and immediately contact the AO. Within five working days the AO will inform the operator as to:
 - whether the materials appear to be of noteworthy scientific interest
 - the mitigation measures the operator will likely have to undertake before the site can be used (assuming in situ preservation is not feasible)

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

- 2) Proposed 13-9-299 well pad, access route and well tie pipeline: If it becomes necessary, at any time, to excavate into the underlying rock formation to level the well pad, excavate any pits or bury the well tie a monitor shall be required for all such excavations into the underlying rock formation.
- 3) Proposed 14-9-299 well pad, access route and well tie pipeline: If it becomes necessary, at any time, to excavate into the underlying rock formation to level the well pad, excavate any pits or bury the well tie a monitor shall be required for all such excavations into the underlying rock formation.

ELEMENTS NOT PRESENT OR NOT AFFECTED:

No flood plains, prime and unique farmlands, exist within the area affected by the proposed action. There are also no known Native American religious or environmental justice concerns associated with the proposed action.

OTHER ELEMENTS: For the following elements, only those brought forward for analysis will be addressed further.

Other Element	NA or Not Present	Applicable or Present, Not Brought Forward for Analysis	Applicable & Present and Brought Forward for Analysis
Visual Resources			X
Fire Management			X
Forest Management			X

Other Element	NA or Not Present	Applicable or Present, Not Brought Forward for Analysis	Applicable & Present and Brought Forward for Analysis
Hydrology/Water Rights		X	
Rangeland Management			X
Wild Horses	X		
Realty Authorizations			X
Recreation			X
Access and Transportation			X
Geology and Minerals			X
Areas of Critical Environmental Concern	X		
Wilderness	X		
Wild and Scenic Rivers	X		
Cadastral	X		
Socio-Economics	X		
Law Enforcement	X		

VISUAL RESOURCES

Affected Environment: The proposed action is located with a Visual Resource Management (VRM) Class III area. The objective of the VRM III class 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.

Environmental Consequences of the Proposed Action: Due to the nature of the proposed action, vegetation will be removed from the well pad locations, pipelines and roads. The contrast between the disturbed surfaces and the surrounding vegetation may attract the attention of the casual observer traveling Rio Blanco County (RBC) roads 70 and 68. Public traveling RBC 70 and 68 will generally be oil and gas employees, ranchers and big game hunters in the fall. The greatest anticipated contrast would occur during the construction and drilling phases when the activity and color of the equipment area at the highest concentration. Post completion of the wells, it is proposed by the applicant that the wellpad locations will be reclaimed to necessary working surfaces then seeded with a BLM approved seed mix. It is also proposed that the facilities will be placed in a manner to reduce their visibility then painted with Juniper Green from the Standard Environmental Color Chart CC-001. This action will reduce the impacts on the visual resources and the objectives of the VRM Class III will be retained.

Environmental Consequences of the No Action Alternative: There would be disturbances that would attract the attention of the casual observer.

Mitigation: None above that which is proposed in the proponent's SUPO.

FIRE MANAGEMENT

Affected Environment: The proposed action is located within the C6 – Lower Piceance Creek Fire management Polygon. Polygon C's are areas where fire is desired but where there may be social, political, or ecological constraints that must be considered. These constraints could include air quality considerations, threatened or endangered species considerations, or other habitat considerations (both spatial and temporal). The C6 polygon vegetation is primarily pinion-juniper woodlands and Wyoming Big Sagebrush vegetative communities. The Fire Management objective is to enhance deer winter range and promote a vegetation mosaic representing natural distributions of plant communities of varying successional stages.

Environmental Consequences of the Proposed Action: Due to the nature of the proposed action there is a need to clear the vegetation. Trees and brush are generally stockpiled adjacent to the wellpad location or windrowed along roads and pipelines then saved for reclamation purposes. Trees in excess of what is needed for reclamation, if not adequately treated, will result in elevated hazardous fuels conditions and remain on-site for many years. These accumulations of dead material are very receptive to fire brands and spotting from wind driven fires and can greatly accelerate the rate of spread of the fire front. The road(s) associated with this project may be used by the general public for a variety of uses, including access for fire wood gathering, hunting and other dispersed recreational activities. Increased public use of an area will nearly always result in an increased potential for man-caused wildland fires.

Environmental Consequences of the No Action Alternative: Under this alternative there would be no disturbance in the vegetation increasing the surface fuel loading.

Mitigation: The following items should be added as COAs:

- 1) When working on lands administered by 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 contact information. The reporting party, or a representative of, should remain nearby in order to make contact with incoming fire resources to expedite actions taken towards an appropriate management response. The applicant and contractors will not engage in any fire suppression activities outside the approved project area. Accidental ignitions caused by welding, cutting, grinding, etc. will be suppressed by the applicant only if employee safety is not 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. If a natural ignition occurs within the approved project area, the fire may be initially contained by the applicant only if employee safety is not endangered. The use of heavy equipment for fire suppression is prohibited, unless authorized by the AO.
- 2) Slash and woody debris associated from the disturbance shall follow mitigations as written under Forest Management.

FOREST MANAGEMENT

Affected Environment: The proposed wellpad locations, access roads and pipelines are within mature productive exposures of pinion-juniper stands. Productive exposure types occur on primarily lower gradient slopes and north and east aspects. Growth rates are higher in these areas due to soil features which allow for effective use of precipitation. Mature pinion/juniper trees on productive exposure establish themselves as the dominant plant community on the site. Young pinion/juniper trees are a component of the entire plant community. Young trees tend to invade sagebrush communities over time. At the onsite, Mesa Energy agreed to move the 13-9-299 wellpad location approximately 250 feet upslope for the original proposed location to avoid impacts to a mature stand of pinion and juniper. The proposed road and pipeline routes traverse both mature and young pinion and juniper stands.

Environmental Consequences of the Proposed Action: The following table shows the estimated loss of woodland acres by well number. Following reclamation of the well pads and associated disturbances it is expected that pinion and juniper will invade the site within 50-70 years and would develop a mature stand within 250-350 years. Under the proposed action about 11.8 acres of woodlands would be removed. The loss of pinion-juniper woodland would adversely affect wildlife and nesting habitat. Impacts would be long-term until woodlands regenerate successfully. Removal of mature and middle-aged pinion and juniper trees would reduce the potential for outbreak of woodland diseases and pest infestations. By reducing the stand size of pinion and juniper trees in areas historically included in sagebrush and grass communities, it would increase the open areas preferred as foraging areas by wildlife, livestock and wild horses. Acceptance of mitigation measures outlined for fire management would reduce the build-up of cleared woody material from the project area, reducing the likelihood of slash contributing to possible large fire events.

Well Name	Acreage In Woodlands					
	Pad Acres	Access Rd. (Ac)	Pipeline	Acres Disturbed (Total)	Stand Class	Total Cords
BDU 13-9-299	0	.9	1.8	2.7	Mature Productive Exposure	13.5
	4.2	0	0	4.2	Young Productive Exposure	12.6
BDU 14-9-299	3.4	.64	.86	4.9	Mature Productive Exposure	24.5

Environmental Consequences of the No Action Alternative: There would be no impacts to the woodlands.

Mitigation: The following items should be added as COAs:

- 1) In accordance with the 1997 White River RMP/ROD page 2-22, all trees removed in the process of construction shall be purchased from the BLM.

- 2) Trees or shrubs that must be removed for construction or ROW preparation shall be cut down to a stump height of 6 inches or less prior to other heavy equipment operation.
- 3) Trees removed during construction that are not needed for reclamation purposes shall be cut in four foot lengths (down to 4 inches diameter) and placed in manageable stacks immediately adjacent to a public road to facilitate removal for company use or removal by the public.
- 4) Woody materials required for reclamation shall be stockpiled along the margins of the authorized use area separate from the topsoil piles.
- 5) Once the disturbance has been recontoured and reseeded, stockpiled woody material shall be scattered across the reclaimed area where the material originated. Redistribution of woody debris will not exceed 20% ground cover. Woody material will be distributed in such a way to avoid large concentrations of heavy fuels and to effectively deter vehicle use especially along pipeline routes.

RANGELAND MANAGEMENT

Affected Environment: The proposed well pads, pipelines, and access routes are located within the Dry Ryan pasture of the Reagles grazing allotment (06026). Authorized livestock use within this pasture occurs during late spring, and fall/winter as shown in the table below.

Authorized use Within the Reagles Allotment (06026)						
Pasture	Livestock		Grazing Period		%Public Land	Authorized Use (AUMs)
	Number	Kind	Begin	End		
Dry Ryan	81	C	5/1	6/25	100	149
Equity/Dry Ryan	81	C	9/16	12/15	100	242

Environmental Consequences of the Proposed Action: The proposed action would result in a short-term loss of about 3 AUMs of livestock forage. This initial loss of forage would be considered short term, if revegetation is prompt and effective there would be no net loss of AUMs over the long term.

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

Mitigation: Any range improvement projects such as fences, water developments, or other livestock handling/distribution facilities that are damaged or destroyed as a 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 action occurs within the White River Extensive Recreation Management Area (ERMA). BLM custodially manages the ERMA to provide for unstructured recreation activities such as hunting, dispersed camping, hiking, horseback riding, wildlife viewing and off-highway vehicle use. These groups tend to seek out physical and social recreation settings that are typically characterized by a natural appearing environment providing some isolation from the sights and sounds of humans, where there is low interaction between users but evidence of other users may be present and generally providing an environment that offers challenge and risk. The primary recreationist that takes advantage of this setting in this area is the upland big game hunter. The proposed action is located within the CDOW Game Management Unit (GMU) 22. GMU 22 is a popular big game hunting area where the hunter has good opportunities to pursue both mule deer and elk.

Environmental Consequences of the Proposed Action: The public will most likely not recreate in the vicinity of these wellpads and will be dispersed elsewhere. If pad development and drilling activities coincide with the various hunting seasons (late August through December), it will most likely disrupt the experience sought by those recreationists.

With the introduction of new well pads and roads, an increase of traffic could be expected increasing the likelihood of human interactions, the sights and sounds associated with the human environment and a less naturally appearing environment.

Environmental Consequences of the No Action Alternative: There would be no activities that would redirect recreational use in the area.

Mitigation: None

ACCESS AND TRANSPORTATION

Affected Environment: The proposed action is located along RBC roads 68 and 70. The primary access into the area will be via RBC 91 and/or RBC 68. RBC 68 is the main access route to multiple Williams' natural gas wellpads north of the proposed action and the Wilgath Sagebrush Compressor Station to the south of the proposed action. RBC 68, 70 and 91 are primary routes for public land big game hunters to access hunting areas and/or camping locations.

Environmental Consequences of the Proposed Action: BDU 14-9-299 proposes approximately 320 feet of upgrade to an existing two track and BDU 13-9-299 proposes approximately 1,120 feet of upgraded a two track on a pipeline in order have adequate access for the size of equipment working on the project. Due to the improved access into these areas, the public may be encouraged to travel the routes more and either follow the remnant routes at the end of the improvements or create new routes to serve their needs. Construction activities occurring during the big game hunting season may have an impact on travel in the area of the proposed action. The pipeline construction along RBC 70 will have the greatest impact on travel

in the area no matter the time of year, but the greatest impacts to travel will be during the fall when the big game hunters travel from Dry Ryan Ridge to Wolf Ridge via RBC 70. The increase in traffic associated with the proposed action would attract attention to the area by either the presence of vehicles or the dust associated with frequent travel along the dirt routes. RBC 70, 91 and portions of 68 are natural surface roads. The amount of large vehicular traffic expected with the proposed action may cause the roads to have excess dust that may reduce visibility. Also during inclement weather the heavy truck traffic may cause damage to both the unnamed BLM roads and RBC 68, 70 and 91 routes.

Environmental Consequences of the No Action Alternative: There would be no increase in traffic associated with Oil and Gas activities.

Mitigation: Follow the Rio Blanco County Road and Bridge guidance for activities along RBC 70 and RBC 68 for travel safety. Notify the WRFO of any route closures due to construction activities. The condition of the unnamed BLM route will be returned to the condition existing prior to construction or better.

REALTY AUTHORIZATIONS

Affected Environment: The access roads and pipeline corridors are located within the Buckhorn Draw Unit boundary; therefore no realty right-of-way authorization is needed. Existing rights-of-way are pipeline right-of-way (ROW) COC27134, power line ROW COC39354, and County Road 70.

Environmental Consequences of the Proposed Action: The proposed action is to upgrade the ROW maintenance road along Public Service Company of Colorado's pipeline right-of-way COC27134 for an access road to serve the BDU 13-9-299 well pad. The proposed pipeline corridor to serve the BDU 13-9-299 is adjacent to County Road 70 and ROW COC27134. White River Electric Association's power line ROW COC39354 will be adjacent to and crossed by the pipeline corridors. Construction activity of the access road to serve BDU 13-9-299 and the pipeline corridors could impact existing rights-of-way. White River Electric Association and Public Service Company of Colorado should be notified prior to construction. Rio Blanco County Road & Bridge Department should be notified and any necessary permits obtained when construction activity is planned adjacent to County Road 70.

Environmental Consequences of the No Action Alternative: None

Mitigation: All activities shall comply with applicable local, state, and federal laws, statutes, regulations, standards, and implementation plans. This would include acquiring all required State and Rio Blanco County permits, effectively coordinating with existing facility ROW holders, and implementing all applicable mitigation measures required by each permit. Rio Blanco County Road & Bridge Department shall be contacted and any permits obtained prior to any construction activity adjacent to County Road 70.

GEOLOGY AND MINERALS

Affected Environment: Surficial geology of the proposed well locations is Uinta and Mesa's targeted zone is located in the Mesaverde. During drilling, potential water, oil shale, sodium, and gas zones will be encountered from surface to the targeted zone. Fresh water aquifers that will be encountered during drilling are in the upper portion (~2,000 feet) of the wells. These are commonly known as the Perched in the Uinta, the A-groove, B-groove and the Dissolution Surface in the Green River formation. The Green River aquifer zones and portions of the Wasatch formation are known for difficulties in drilling and cementing. Both wells are located in the area identified in the ROD/RMP as available for oil shale leasing. BDU 14-9-299 is located 800 feet north of the surface expression of a northwest trending fault that dips to the northeast.

The wells and well pads are part of the Buckhorn Draw Exploratory Oil and Gas Unit COC-73788X.

Environmental Consequences of the Proposed Action: The proposed action may affect the fresh water aquifers in the Green River formation if loss circulation occurs during drilling and completion operations. Correctly implemented cementing and completion procedures of the proposed action isolates the formations and will prevent annular migration of gas, water, and oil between formations and aquifer zones. However, the close proximity of the well to the fault location may increase the loss circulation potential in the surface portion of the well creating difficulties in cementing the surface casing.

Development of these wells will deplete the hydrocarbon resources in the targeted formation.

Environmental Consequences of the No Action Alternative: The natural gas resources in the targeted zone would not be recovered at this time.

Mitigation: None.

CUMULATIVE IMPACTS SUMMARY: This action is consistent with the scope of impacts addressed in the White River ROD/RMP. The cumulative impacts of oil and gas activities are addressed in the White River ROD/RMP for each resource value that would be affected by the proposed action.

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.

Conner, Carl E., and Nicole Darnell

2010 Class III Cultural Resource Inventory Report for Three Proposed Well Locations and Related Linear Routes (BDU 25-1-199, BCU 14-9-299, and BDU 13-9-299) in Rio Blanco County, Colorado. Grand River Institute, Grand Junction, Colorado. (10-11-18) (RB.LM.R1199)

Tweto, Ogden

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

PERSONS / AGENCIES CONSULTED:

INTERDISCIPLINARY REVIEW: The proposed action was presented to, and reviewed by the White River Field Office interdisciplinary team on 08/03/2010.
Date

Name	Title	Area of Responsibility	Date Signed
Bob Lange	Hydrologist	Air Quality, Water Quality (Surface and Ground), Hydrology and Water Rights, and Soils	10/08/2010
Jill Schulte	Botanist	Areas of Critical Environmental Concern, Threatened and Endangered Plant Species	8/10/2010
Michael Selle	Archaeologist	Cultural Resources, Paleontological Resources	10/06/2010
Tyrell Turner	Rangeland Management Specialist	Invasive, Non-Native Species, Vegetation , Rangeland Management	10/06/2010
Lisa Belmonte	Wildlife Biologist	Migratory Birds, Threatened, Endangered and Sensitive Animal Species, Terrestrial and Aquatic Wildlife, Wetlands and Riparian Zones	09.27.10
Christina Barlow	Natural Resource Specialist/HazMat Coordinator	Wastes, Hazardous or Solid	10/08/2010
Jim Michels	Outdoor Recreation Planner	Wilderness, Access and Transportation, Recreation,	10/04/2010
Jim Michels	Forester /Fire / Fuels Technician	Fire Management, Forest Management	10/04/2010
Paul Daggett	Mining Engineer	Geology and Minerals	09/30/2010
Stacey Burke	Realty Specialist	Realty Authorizations	09/30/2010
Jim Michels	Natural Resource Specialist / Outdoor Recreation Planner	Visual Resources	10/04/2010
Melissa J. Kindall	Range Technician	Wild Horses	09/28/10

Finding of No Significant Impact/Decision Record (FONSI/DR)

DOI-BLM-CO-110-2010-132-EA

FINDING OF NO SIGNIFICANT IMPACT (FONSI)/RATIONALE: The environmental assessment and analysis of the environmental effects of the proposed action have been reviewed. The approved mitigation measures (listed below) result in a Finding of No Significant Impact on the human environment. Therefore, an environmental impact statement is not necessary to further analyze the environmental effects of the proposed action.

DECISION/RATIONALE: It is my decision to approve the proposed action and authorize the APDs for Mesa Energy Partner LLC's BDU 13-9-299 & BDU 14-9-299 well pads, and associated access roads and pipelines. This decision is contingent upon Mesa Energy complying with and fulfilling the additional the mitigation measures listed below.

The analysis demonstrates that the proposed action, with mitigation, will allow Mesa Energy to exercise valid Federal lease rights on BLM surface through the drilling of the proposed wells and associated actions, in a manner that avoids, minimizes, reduces, or mitigates potential impacts to other resource values. Mitigation measures include all of the actions that would reduce or minimize the effects of the proposed project. Reestablishment of desirable species of vegetation will be included as a part of interim and final reclamation.

The authority for this action is established under the Federal Land Policy and Management Act of 1976 (FLPMA) to respond to the request to develop the Federal Leases.

MITIGATION MEASURES:

General/Reclamation

- 1) The operator shall adhere to all measures regarding reclamation presented in the SUPO (Surface Use Plan of Operations) which has been incorporated into the proposed action of this document.

Air Quality

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

Soils

- 3) The SUPO for the wells indicates that the newly constructed road sections will bury the topsoil in the crown of the road during construction. Because this is poor practice, the

proponent shall instead remove the topsoil and windrow it to the side; build the road shape using subsoil with borrow material from the ditches; and finally replace and seed the topsoil on stable locations within the borrow area.

- 4) All construction and drilling activity shall cease when soils or road surfaces become saturated to a depth of three inches unless there are safety concerns or if activities are otherwise approved by the AO.
- 5) 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 submitting a plan to assure successful soil stabilization with BMPs to address erosion problems.

Waste, Hazardous or Solids

- 6) Comply with all Federal, State and/or local laws and regulations 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.
- 7) Employ, maintain, and periodically update to the best available technology(s) aimed at reducing emissions and hazardous material utilization, production and releases through all phases of oil and gas exploration, development, and production.
- 8) All substances that pose a risk of harm to human health or the environment shall be stored in appropriate containers. Fluids that pose a risk of harm to human health or the environment, including but not limited to produced water, shall be stored in appropriate containers and in secondary containment systems at 110% of the largest vessel's capacity. Secondary fluid containment systems, including but not limited to tank batteries shall be lined with a minimum 24 mil impermeable liner.
- 9) The operator shall submit an updated Spill Prevention Control and Countermeasures Plan (SPCCP) and an updated spill/release contingency plan to the WRFO prior to engaging in construction activities.
- 10) 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.
- 11) In addition to compliance with the reporting requirements of Notice to Lessee's-#3A and regardless of a substance's status as exempt or non-exempt, report all emissions or releases of any quantity of any substance that may pose a risk of harm to human health or the environment to the WRFO at (970) 878-3800.
- 12) Regardless of a substance's status as exempt or non-exempt and regardless of fault, 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. Where the lessee/operator fails, refuses or neglects to provide for the immediate clean-up and testing of air, water (surface and/or ground) and soils contaminated by the emission or release of any quantity of a substance that poses a risk of harm to human health or the environment, the WRFO may take measures to

clean-up and test air, water (surface and/or ground) and soils at the lessee/operator's expense. Such action shall not relieve the lessee/operator of any liability or responsibility.

- 13) With the acceptance of this authorization, the commencement of operations, or the running of thirty calendar days from its issuance, whichever occurs first, and during oil and gas exploration, development and production under this authorization, the operator, and through the operator, its agents, employees, subcontractors, successors and assigns, stipulates and agrees to indemnify, defend and hold harmless the United States Government, its agencies, and employees from all liability associated with the emission or release of substances that pose a risk to human health or the environment.

Water Quality, Surface or Ground

- 14) Locate culverts or drainage dips in such a manner as to avoid discharge onto unstable terrain such as headwalls or slumps. Provide adequate spacing to avoid accumulation of water in ditches or road surfaces. Install culverts with adequate armoring of inlet and outlet. Patrol areas susceptible to road or watershed damage during periods of high runoff.
- 15) Keep road inlet and outlet ditches, catchbasins, and culverts free of obstructions, particularly before and during spring run-off. Routine machine-cleaning of ditches should be kept to a minimum during wet weather. Leave the disturbed area in a condition that provides drainage with no additional maintenance.
- 16) Culverts and waterbars should be installed according to BLM Manual 9113 standards and sized for the 10-year storm event with no static head and to pass a 25-year event without failing.
- 17) Pursuant to Onshore Order No. 7, a permanent disposal method for produced water must be approved by BLM and in operation 90 days after well completion.

Vegetation

- 18) Promptly revegetate all disturbed areas with Native Seed Mix #3 listed below. Woody debris shall not be scattered pipelines until **after** seeding operations are completed. Seed mixture rates are Pure Live Seed (PLS) pounds per acre. Drill seeding is the preferred method of application.

Native Seed Mix #3		
Western wheatgrass (Rosanna)	2	Gravelly 10"-14", Pinyon/Juniper Woodland, Stony Foothills, 147 (Mountain Mahogany)
Beardless wheatgrass (Whitmar)	2	
Thickspike wheatgrass (Critana)	1	
Indian ricegrass (Rimrock,)	2	
Alternates: Needle and thread, globemallow		

- 19) 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 sundry will include the purpose of the seeding activity (i.e., seeding well pad cut and fill slopes, seeding pipeline corridor, etc.). In addition, the SN will include the well or well pad number associated with the seeding activity, if applicable, the name of the contractor that performed the work, his or her phone number, the method used to apply the seed (e.g., broadcast, hydro-seeded, drilled), whether the seeding activity represents interim or final reclamation, an estimate of the total acres seeded, an attached map that clearly identifies all disturbed areas that were seeded, and the date the seed was applied.

Migratory Birds

- 20) 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 such birds (e.g., 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.
- 21) All earthwork (vegetation removal) associated with development of both pad locations and construction of new access roads (associated with the 14-9-299 site) will take place outside of the migratory bird nesting season (May 15 – July 15).

Wildlife, Terrestrial

- 22) Should construction be delayed into the 2011 breeding season, a raptor survey (spot-check of existing nests) will be required and results provided to BLM staff biologists prior to construction. All raptor surveys will be performed following methods and procedures described in the WRFO Diurnal Raptor Survey Protocol. The third-party contractor responsible for conducting raptor surveys associated with the proposed action will contact the WRFO and request the most current version of the WRFO Diurnal Raptor Survey Protocol prior to performing surveys. Should an active nest be located, no development activities will be allowed within ¼ - ½ mile (depending on species) of the identified nest site from February 1 through August 15 or until young have fledged and dispersed from the nest stand (TL-01 and 04 WRFO ROD). No surface occupancy would be allowed within 1/8 - ¼ mile (depending on species) of identified nests (NSO-02 and 03 WRFO ROD).
- 23) All raptor nests (e.g., stick-built structures, nest cavities, eyries), regardless of their breeding or non-breeding season status, are to be reported to WRFO Natural Resource Specialist, Brett Smithers (see contact information below) via phone (970-878-3818) or by email (preferred; brett_smithers@blm.gov) within 24 hrs of the observation. Please provide the following when reporting nests: 1) the species observed using the nest; 2) UTM coordinates for the nest (recorded in NAD83, Zone 12); 3) date nest was first documented; 4) brief summary describing adult and/or juvenile behavior, number of nestlings observed, etc.; and, 5) relevant project information (e.g., project name and NEPA document number, if known) .

Cultural Resources

Cultural Mitigation common to both of the well pad, access routes and well tie pipelines:

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

confirm, through the State Historic Preservation Officer, that the findings of the AO are correct and that mitigation is appropriate.

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

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

Cultural Mitigation specific to the proposed BDU 13-9-299 well pad, access routes and well tie pipelines:

- 26) All disturbances associated with access and well tie pipeline construction north of the well pad must remain on the east side of the existing disturbance to avoid site 5RB.5609.
- 27) A monitor shall be present at all times during construction work in the vicinity of the site to ensure it is avoided.

Cultural Mitigation specific to the proposed BDU 14-9-299 well pad, access routes and well tie pipelines:

- 28) The well center stake must be moved at least 15 meters south to minimize the potential to impact sites 5RB6640 and 5RB6641.
- 29) A monitor shall be present during all vegetation clearing and pad leveling to ensure previously unknown subsurface features, if any exist, are identified in the vicinity of the two sites.

Paleontology

- 30) The operator is responsible for informing all persons who are associated with the project operations that they will be subject to prosecution for knowingly disturbing paleontological sites, or for collecting fossils. If fossil materials are uncovered during any project or construction activities, the operator is to immediately stop activities in the immediate area of the find that might further disturb such materials, and immediately contact the AO. Within five working days the AO will inform the operator as to:
- whether the materials appear to be of noteworthy scientific interest
 - the mitigation measures the operator will likely have to undertake before the site can be used (assuming in situ preservation is not feasible)

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

required mitigation has been completed, the operator will then be allowed to resume construction.

- 31) Proposed 13-9-299 well pad, access route and well tie pipeline: If it becomes necessary, at any time, to excavate into the underlying rock formation to level the well pad, excavate any pits, or bury the well tie a monitor shall be required for all such excavations into the underlying rock formation.
- 32) Proposed 14-9-299 well pad, access route and well tie pipeline: If it becomes necessary, at any time, to excavate into the underlying rock formation to level the well pad, excavate any pits, or bury the well tie a monitor shall be required for all such excavations into the underlying rock formation.

Fire Management

- 33) When working on lands administered by 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 contact information. The reporting party, or a representative of, should remain nearby in order to make contact with incoming fire resources to expedite actions taken towards an appropriate management response. The applicant and contractors will not engage in any fire suppression activities outside the approved project area. Accidental ignitions caused by welding, cutting, grinding, etc. will be suppressed by the applicant only if employee safety is not 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. If a natural ignition occurs within the approved project area, the fire may be initially contained by the applicant only if employee safety is not endangered. The use of heavy equipment for fire suppression is prohibited, unless authorized by the AO.
- 34) Slash and woody debris associated from the disturbance shall follow mitigations as written under Forest Management.

Forest Management

- 35) In accordance with the 1997 White River RMP/ROD page 2-22, all trees removed in the process of construction shall be purchased from the BLM.
- 36) Trees or shrubs that must be removed for construction or ROW preparation shall be cut down to a stump height of 6 inches or less prior to other heavy equipment operation.
- 37) Trees removed during construction that are not needed for reclamation purposes shall be cut in four foot lengths (down to 4 inches diameter) and placed in manageable stacks immediately adjacent to a public road to facilitate removal for company use or removal by the public.
- 38) Woody materials required for reclamation shall be stockpiled along the margins of the authorized use area **separate from the topsoil piles**.
- 39) Once the disturbance has been recontoured and reseeded, stockpiled woody material shall be scattered across the reclaimed area where the material originated. Redistribution of woody debris will not exceed 20% ground cover. Woody material will be distributed in such a way to avoid large concentrations of heavy fuels and to effectively deter vehicle use especially along pipeline routes.

Rangeland Management

- 40) Any range improvement projects such as fences, water developments, or other livestock handling/distribution facilities that are damaged or destroyed as a result of implementation of the proposed action shall be promptly repaired or replaced by the applicant to restore pre-disturbance functionality.

Access and Transportation

- 41) Follow the Rio Blanco County Road and Bridge guidance for activities along RBC 70 and RBC 68 for travel safety. Notify the WRFO of any route closures due to construction activities. The condition of the unnamed BLM route will be returned to the condition existing prior to construction or better.

Realty Authorizations

- 42) All activities shall comply with applicable local, state, and federal laws, statutes, regulations, standards, and implementation plans. This would include acquiring all required State and Rio Blanco County permits, effectively coordinating with existing facility ROW holders, and implementing all applicable mitigation measures required by each permit. Rio Blanco County Road & Bridge Department shall be contacted and any permits obtained prior to any construction activity adjacent to County Road 70.

Notification, Information Sharing, and SOPs

- 43) The operator shall apply proper pre-planning and plan all activities and operations in a manner so as to avoid infringing on any timing limitations; without the need to apply for exceptions to the specified timing limitations.
- 44) The *designated Natural Resource Specialist* will be notified 24 hours prior to beginning all construction-related activities associated with this project that result in disturbance of surface soils via email or by phone. Construction-related activities may include, but are not limited to, pad and road construction, clearing pipeline corridors, trenching, etc. Notification of all construction-related activities, regardless of size, that result in disturbance of surface soils as a result of this project is required.
- 45) In an attempt to track interim and final reclamation of federal actions related to the development of federal mineral resources, the operator shall provide the *designated Natural Resource Specialist* with geospatial data in a format compatible with the WRFO's ESRI ArcGIS Geographic Information System (GIS); GIS point and polygon features. These data will be used to accurately locate and identify all geographic as-built (i.e., constructed and design implemented) features associated with this project and included in the APD or SN.
- These data shall be submitted within 60 days of construction completion. If the operator is unable to submit the required information within the specified time period, the operator shall notify the *designated Natural Resource Specialist* via email or by phone, and provide justification supporting an extension of the required data submission time period.
 - GIS *polygon* features may include, but are not limited to; full well pad footprints (including all stormwater and design features), constructed access roads/widths, existing roads that were upgraded/widths, and pipeline corridors.
 - Acceptable data formats are: (1) corrected global positioning system (GPS) files with sub-meter accuracy or better; (2) ESRI shapefiles or geodatabases; or, (3) AutoCAD .dwg or .dxf files. If possible, both (2) and (3) should be submitted for each as-built feature. Geospatial data must be submitted in UTM Zone 13N, NAD 83, in units of

meters. Data may be submitted as: (1) an email attachment; or (2) on a standard compact disk (CD) in compressed (WinZip only), or uncompressed format. All data shall include metadata, for each submitted layer, that conforms to the *Content Standards for Digital Geospatial Metadata* from the Federal Geographic Data Committee standards. Questions shall be directed to WRFO BLM GIS staff at (970) 878-3800.

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

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

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

- 46) If for any reason the location or orientation of the geographic feature associated with the **proposed action changes**, the operator shall submit updated GIS “As-Built” data to *designated Natural Resource Specialist* within 7 calendar days of the change. This information shall be **submitted via Sundry Notice**.
- 47) The *designated Natural Resource Specialist* will be notified 24 hours prior to well spud (Breaking ground for drilling surface casing) via email or phone.
- 48) The *designated Natural Resource Specialist* will be notified 24 hours prior to commencing Completion operations via email or phone.
- 49) The *designated Natural Resource Specialist* will be notified 24 hours prior to beginning all reclamation activities associated with this project via email or by phone. Reclamation activities may include, but are not limited to, seed bed preparation that requires disturbance of surface soils, seeding, constructing exclosures (e.g., fences) to exclude livestock from reclaimed areas.
- 50) The Reclamation Status Report will be submitted electronically via email and as a hard-copy to WRFO Reclamation Coordinator, Brett Smithers (brett_smithers@blm.gov). Please submit the hardcopy to:

BLM, White River Field Office
220 East Market Street
Meeker, Colorado 81641
Attn: Brett Smithers

The Reclamation Status Report will be submitted annually for all actions that require disturbance of surface soils on BLM-administered lands as a result of the proposed action. Actions may include, but are not limited to, well pad and road construction, construction of ancillary facilities, or power line and pipeline construction. The Reclamation Status Report will be submitted by September 30th of each calendar year, and will include the well number, API number, legal description, UTM coordinates (using the NAD83 datum, Zone 13N

coordinate system), project description (e.g., well pad, pipeline, etc.), reclamation status (e.g., Phase I Interim, Phase II Interim, or Final), whether the well pad or pipeline has been re-vegetated and/or re-contoured, percent of the disturbed area that has been reclaimed, method used to estimate percent area reclaimed (e.g., qualitative or quantitative), technique used to estimate percent area reclaimed (e.g., ocular, line-intercept, etc.), date seeded, photos of the reclaimed site, estimate of acres seeded, seeding method (e.g., broadcast, drilled, hydro-seeded, etc.), and contact information for the person(s) responsible for developing the report. The report will be accompanied with maps and GIS data showing each discrete point (i.e., well pad), polygon (i.e., area where seed was applied for Phase I and/or Phase II interim reclamation or area reclaimed for final reclamation), or polyline (i.e., pipeline) feature that was included in the report. Geospatial data shall be submitted: for each completed activity electronically to the designated BLM staff person responsible for the initial request and in accordance with WRFO geospatial data submittal standards (available from WRFO GIS Staff, or on the WRFO website). Internal and external review of the WRFO Reclamation Status Report, and the process used to acquire the necessary information will be conducted annually, and new information or changes in the reporting process will be incorporated into the report.

- 51) The operator will be required to meet with the WRFO reclamation staff in March or April of each calendar year and present a comprehensive work plan. The purpose of the plan is to provide information pertaining to reclamation activities that are expected to occur during the current growing season. Operators shall also provide a map that shows all reclamation sites where some form of reclamation activity is expected to occur during the current growing season.

COMPLIANCE/MONITORING: On-going compliance inspections and monitoring will be conducted by the BLM White River Field Office staff during and after construction. Specific mitigation developed in this document will be followed. The operator will be notified of compliance related issues in writing, and depending on the nature of the issue(s), will be provided 30 days to resolve such issues.

NAME OF PREPARER: Briana Potts

NAME OF ENVIRONMENTAL COORDINATOR: Kristin Bowen

SIGNATURE OF AUTHORIZED OFFICIAL:

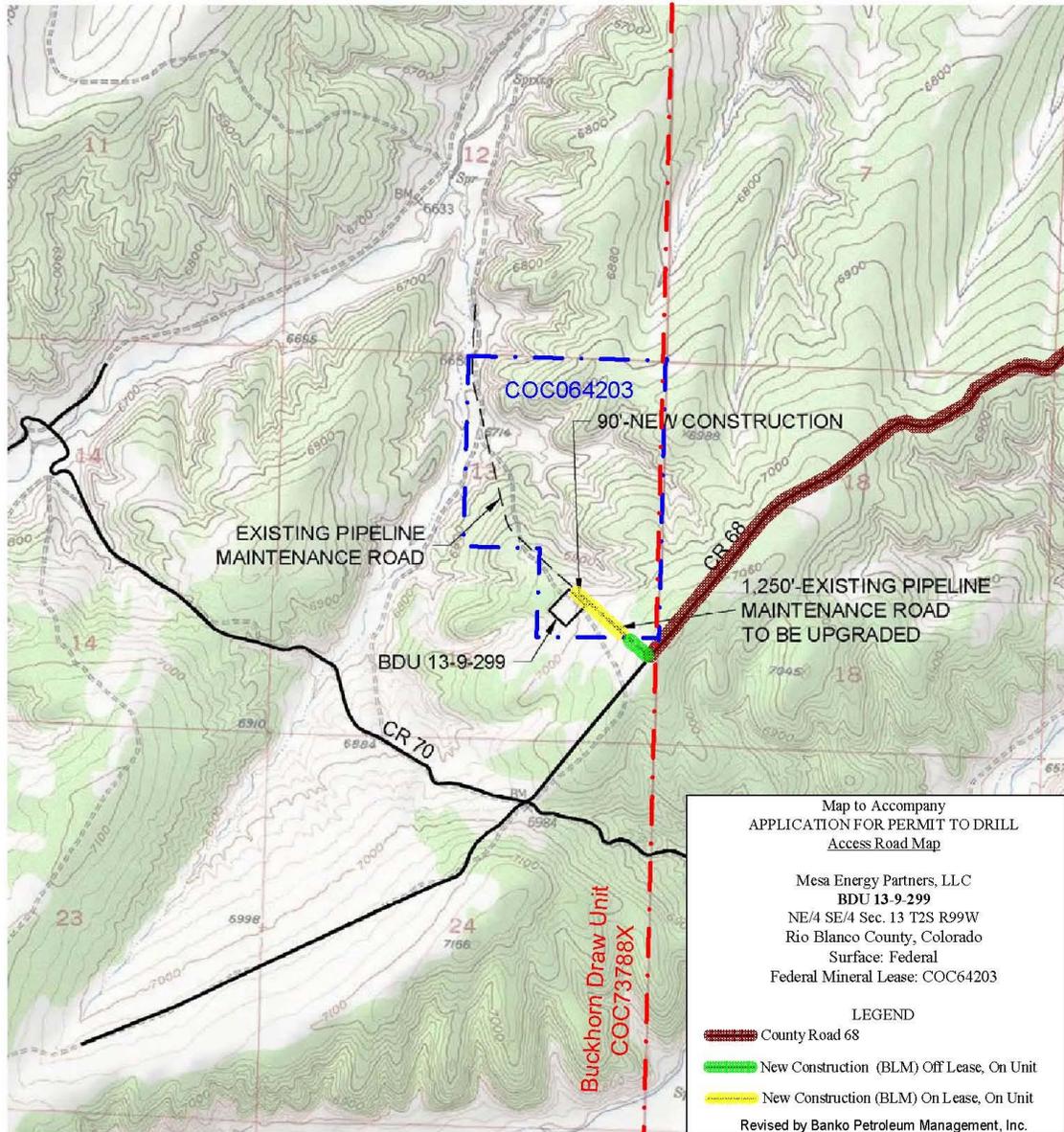

Field Manager

DATE SIGNED: 11/5/2010

ATTACHMENTS: Project Maps

ACCESS ROAD MAP

BDU 13-9-299 PAD



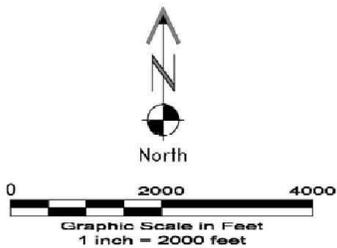
Map to Accompany
APPLICATION FOR PERMIT TO DRILL
Access Road Map

Mesa Energy Partners, LLC
BDU 13-9-299
NE/4 SE/4 Sec. 13 T2S R99W
Rio Blanco County, Colorado
Surface: Federal
Federal Mineral Lease: COC64203

LEGEND

-  County Road 68
 -  New Construction (BLM) Off Lease, On Unit
 -  New Construction (BLM) On Lease, On Unit
- Revised by Banko Petroleum Management, Inc.

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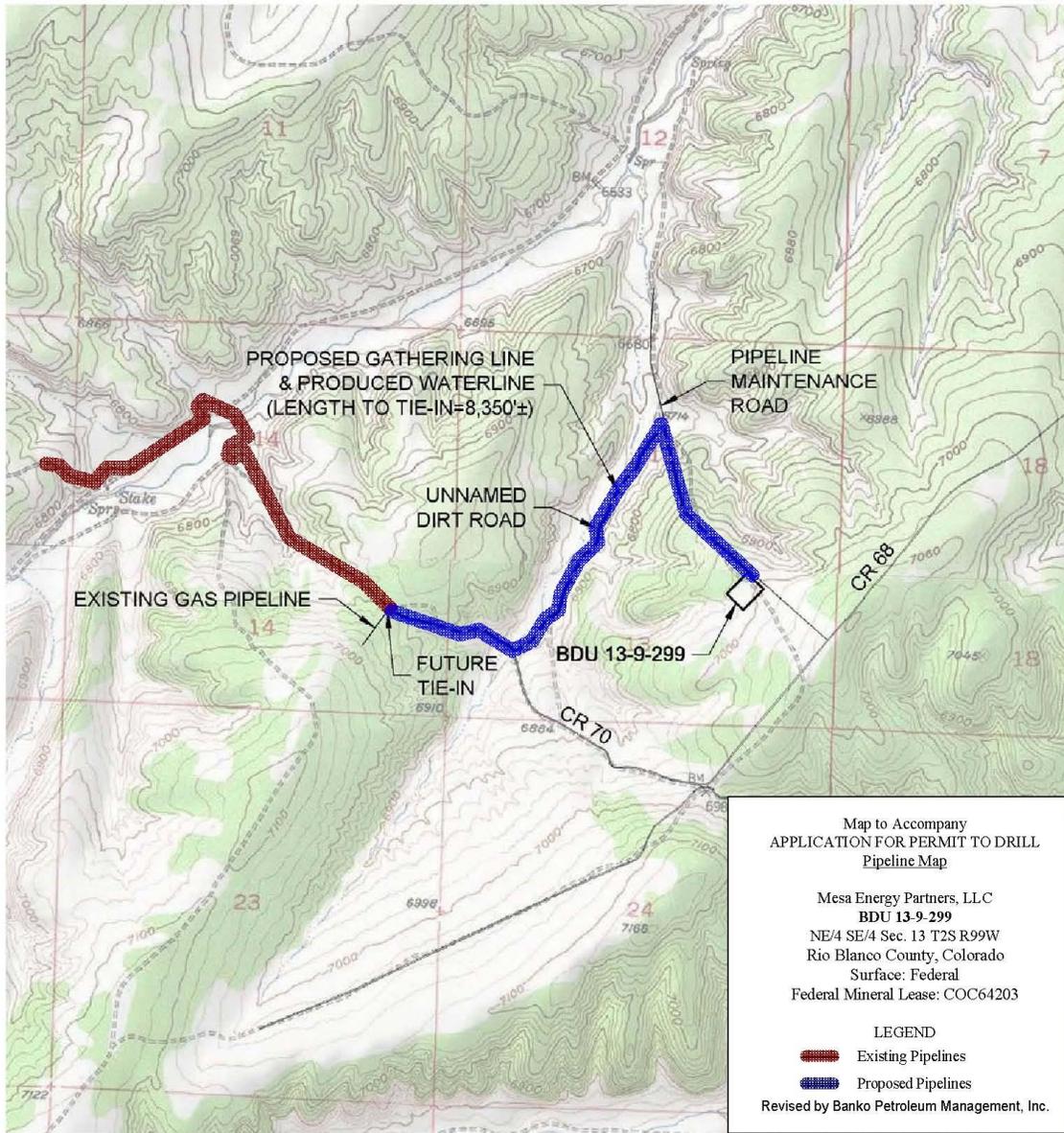



LAND SURVEYING AND MAPPING
LAFAYETTE - WINTER PARK
Ph 303 666 0379 Fx 303 665 6320

MESA ENERGY PARTNERS, LLC
BDU 13-9-299
NE1/4 SE1/4 SEC. 13 T2S R99W
6th PM RIO BLANCO COUNTY COLORADO

PROPOSED PIPELINE MAP

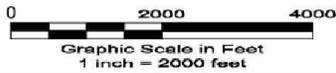
BDU 13-9-299 PAD



Map to Accompany
APPLICATION FOR PERMIT TO DRILL
Pipeline Map

Mesa Energy Partners, LLC
BDU 13-9-299
NE/4 SE/4 Sec. 13 T2S R99W
Rio Blanco County, Colorado
Surface: Federal
Federal Mineral Lease: COC64203

LEGEND
 Existing Pipelines
 Proposed Pipelines
 Revised by Banko Petroleum Management, Inc.



12 OF 12 6/24/10

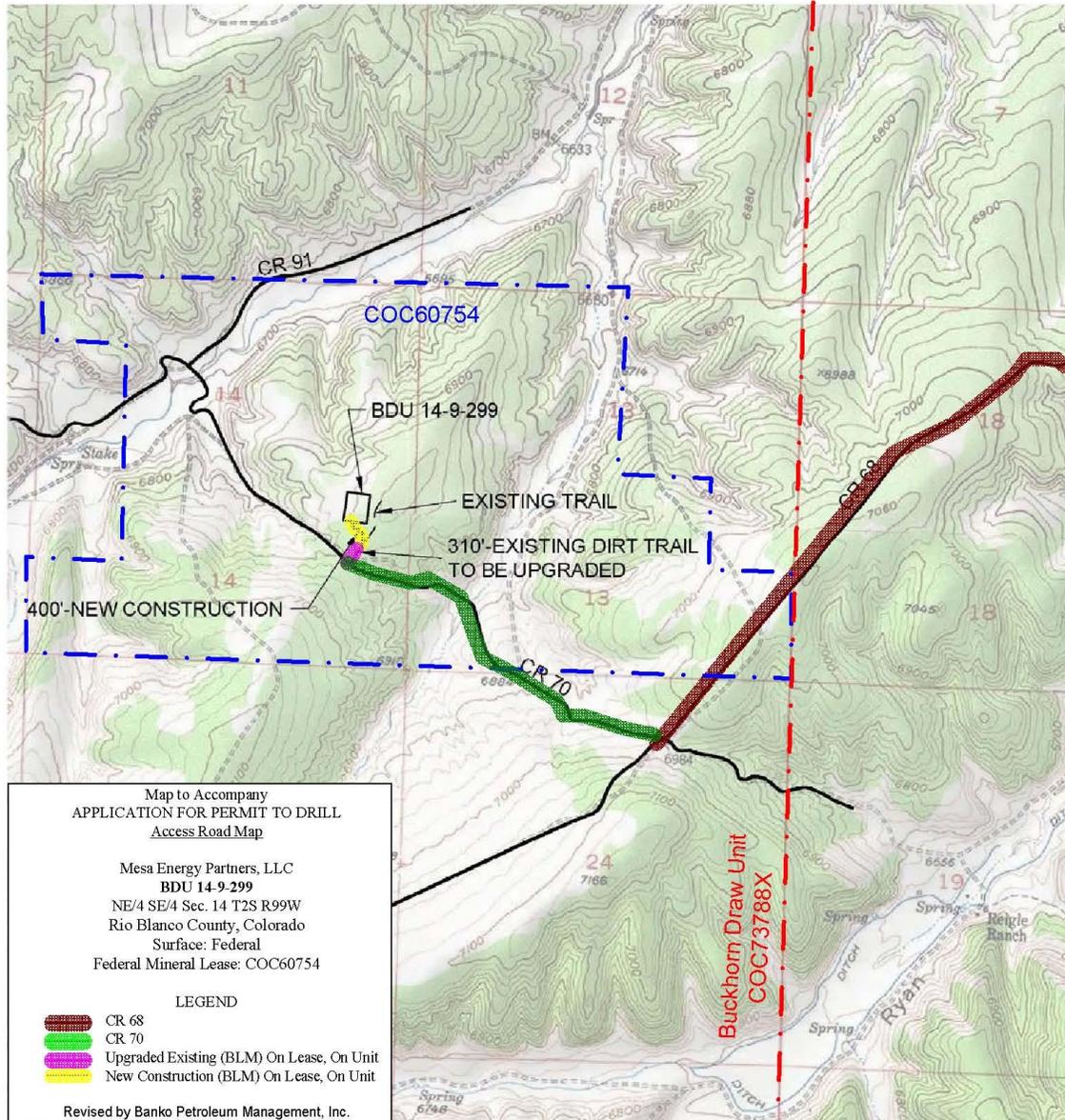


LAND SURVEYING AND MAPPING
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MESA ENERGY PARTNERS, LLC
BDU 13-9-299
NE1/4 SE1/4 SEC. 13 T2S R99W
6th PM RIO BLANCO COUNTY COLORADO

ACCESS ROAD MAP

BDU 14-9-299 PAD



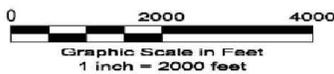
Map to Accompany
APPLICATION FOR PERMIT TO DRILL
Access Road Map

Mesa Energy Partners, LLC
BDU 14-9-299
NE/4 SE/4 Sec. 14 T2S R99W
Rio Blanco County, Colorado
Surface: Federal
Federal Mineral Lease: COC60754

LEGEND

-  CR 68
-  CR 70
-  Upgraded Existing (BLM) On Lease, On Unit
-  New Construction (BLM) On Lease, On Unit

Revised by Banko Petroleum Management, Inc.



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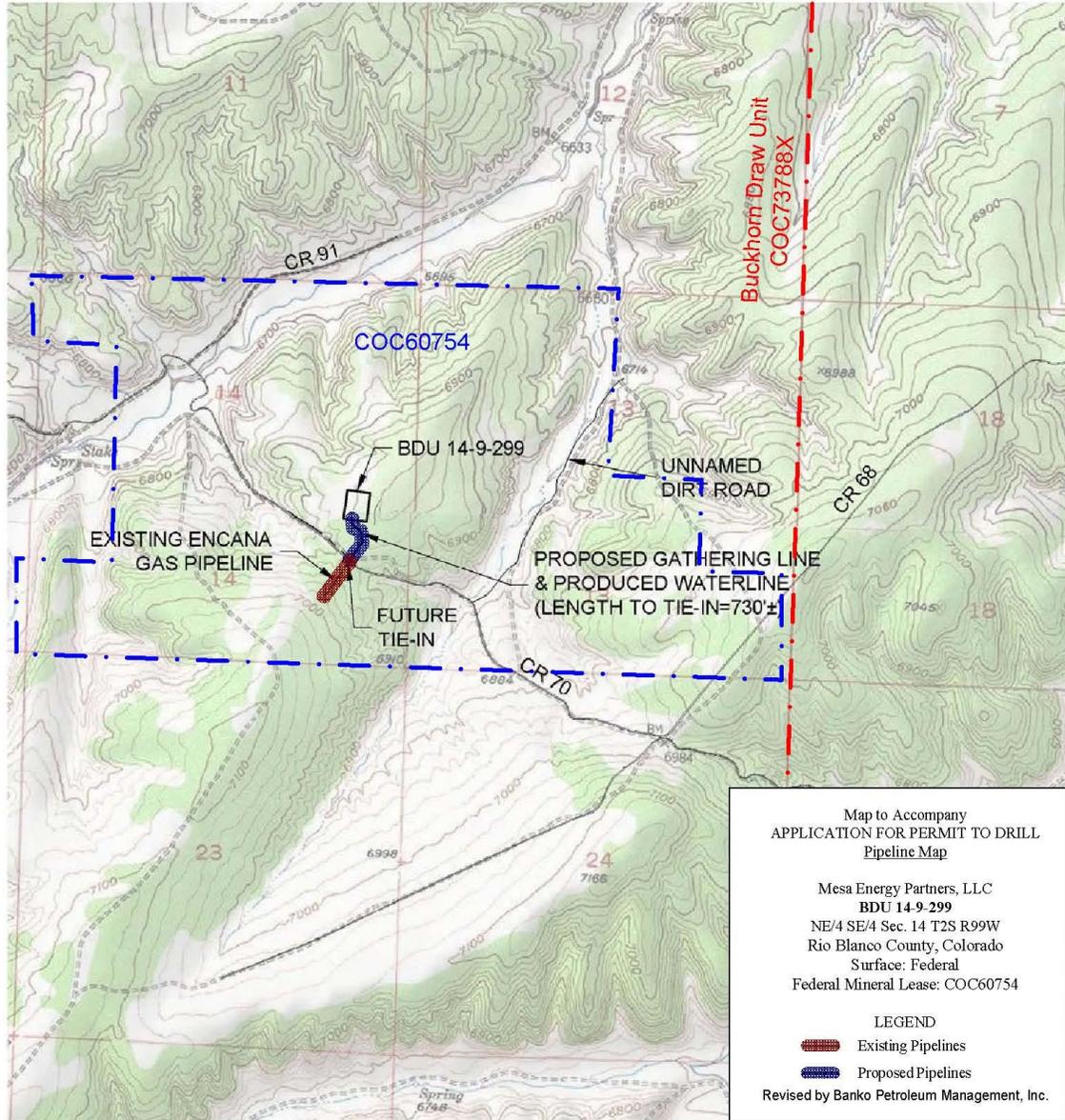
LAND SURVEYING AND MAPPING
LAFAYETTE - WINTER PARK
Ph 303 666 0379 Fx 303 665 6320

MESA ENERGY PARTNERS, LLC
BDU 14-9-299

NE1/4 SE1/4 SEC. 14 T2S R99W
6th PM RIO BLANCO COUNTY COLORADO

PROPOSED PIPELINE MAP

BDU 14-9-299 PAD



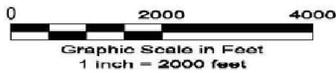
Map to Accompany
APPLICATION FOR PERMIT TO DRILL
Pipeline Map

Mesa Energy Partners, LLC
BDU 14-9-299
NE/4 SE/4 Sec. 14 T2S R99W
Rio Blanco County, Colorado
Surface: Federal
Federal Mineral Lease: COC60754

LEGEND
 Existing Pipelines
 Proposed Pipelines

Revised by Banko Petroleum Management, Inc.

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12 OF 12 6/29/10

LAND SURVEYING AND MAPPING
LAFAYETTE - WINTER PARK
 Ph 303 666 0379 Fx 303 665 6320

MESA ENERGY PARTNERS, LLC
BDU 14-9-299

NE1/4 SE1/4 SEC. 14 T2S R99W
6th PM RIO BLANCO COUNTY COLORADO