





## DRILLING WASTE MANAGEMENT PROGRAM

Drilling Fluids Disposal: OFFSITE Drilling Fluids Disposal Method: Recycle/reuse

Cutting Disposal: ONSITE Cuttings Disposal Method: Other

Other Disposal Description:

Drilling mud will be recycled and reused in other drilling operations. Once all drilling is completed the drilling mud will be disposed of at a commercial disposal facility. Cuttings will be stored on location, treated, stacked and disposed of onsite.

Beneficial reuse or land application plan submitted? No

Reuse Facility ID: \_\_\_\_\_ or Document Number: \_\_\_\_\_

Centralized E&P Waste Management Facility ID, if applicable: \_\_\_\_\_

## SURFACE & MINERALS & RIGHT TO CONSTRUCT

Name: Laramie Energy LLC

Phone: 970-263-3600

Address: 1401 Seventeenth Street

Fax: \_\_\_\_\_

Address: Suite 1400

Email: jproulx@laramie-energy.com

City: Denver State: CO Zip: 80202

Surface Owner:  Fee  State  Federal  Indian

Check all that apply. The Surface Owner:  is the mineral owner

is committed to an oil and Gas Lease

has signed the Oil and Gas Lease

is the applicant

The Mineral Owner beneath this Oil and Gas Location is:  Fee  State  Federal  Indian

The Minerals beneath this Oil and Gas Location will be developed from or produced to this Oil and Gas Location: \_\_\_\_\_

The right to construct this Oil and Gas Location is granted by: applicant is owner

Surface damage assurance if no agreement is in place: \_\_\_\_\_ Surface Surety ID: \_\_\_\_\_

Date of Rule 306 surface owner consultation 03/02/2015

## CURRENT AND FUTURE LAND USE

Current Land Use (Check all that apply):

Crop Land:  Irrigated  Dry land  Improved Pasture  Hay Meadow  CRP

Non-Crop Land:  Rangeland  Timber  Recreational  Other (describe): \_\_\_\_\_

Subdivided:  Industrial  Commercial  Residential

Future Land Use (Check all that apply):

Crop Land:  Irrigated  Dry land  Improved Pasture  Hay Meadow  CRP

Non-Crop Land:  Rangeland  Timber  Recreational  Other (describe): \_\_\_\_\_

Subdivided:  Industrial  Commercial  Residential

## CULTURAL DISTANCE INFORMATION

Provide the distance to the nearest cultural feature as measured from Wells or Production Facilities onsite.

	From WELL	From PRODUCTION FACILITY
Building:	<u>1170</u> Feet	<u>1131</u> Feet

### INSTRUCTIONS:

- All measurements shall be provided from center of nearest Well or edge of nearest Production Facility to nearest of each cultural feature as described in Rule 303.b.(3)A.  
- Enter 5280 for distance greater than 1 mile.

Building Unit:	5280 Feet	5280 Feet
High Occupancy Building Unit:	5280 Feet	5280 Feet
Designated Outside Activity Area:	5280 Feet	5280 Feet
Public Road:	5280 Feet	5280 Feet
Above Ground Utility:	1258 Feet	1214 Feet
Railroad:	5280 Feet	5280 Feet
Property Line:	1701 Feet	1526 Feet

- Building - nearest building of any type. If nearest Building is a Building Unit, enter same distance for both.  
 - Building Unit, High Occupancy Building Unit, and Designated Outside Activity Area - as defined in 100-Series Rules.  
 -For measurement purposes only, Production Facilities should only include those items with an asterisk(\*) on the Facilities Tab.

### DESIGNATED SETBACK LOCATION INFORMATION

Check all that apply. This location is within a:

- Buffer Zone
- Exception Zone
- Urban Mitigation Area

- Buffer Zone - as described in Rule 604.a.(2), within 1,000' of a Building Unit.  
 - Exception Zone - as described in Rule 604.a.(1), within 500' of a Building Unit.  
 - Urban Mitigation Area - as defined in 100-Series Rules.  
 - Large UMA Facility - as defined in 100-Series Rules.

Pre-application Notifications (required if location is within 1,000 feet of a building unit):

Date of Rule 305.a.(1) Urban Mitigation Area Notification to Local Government: \_\_\_\_\_  
 Date of Rule 305.a.(2) Buffer Zone Notification to Building Unit Owners: \_\_\_\_\_

### FOR MULTI-WELL PADS AND PRODUCTION FACILITIES WITHIN DESIGNATED SETBACK LOCATIONS ONLY:

- Check this box if this Oil and Gas Location has or will have Production Facilities that serve multiple wells (onl or offsite) and the Production Facilities are proposed to be located less than 1,000 feet from a Building Unit. *(Pursuant to Rule 604.c.(2)E.i., the operator must evaluate alternative locations for the Production Facilities that are farther from the Building Unit, and determine whether those alternative locations were technically feasible and economically practicable for the same proposed development.)*
- By checking this box, I certify that no alternative placements for the Production Facilities, farther from the nearest Building Unit, were available based on the analysis conducted pursuant to Rule 604.c.(2)E.i.

In the space below, explain rationale for siting the multi-well Production Facility(ies) that supports your Rule 604.c.(2)E.i determination. Attach documentation that supports your determination to this Form 2A.

### SOIL

List all soil map units that occur within the proposed location. attach the National Resource Conservation Service (NRCS) report showing the "Map Unit Description" report listing the soil typical vertical profile. This data is to used when segregating topsoil.

The required information can be obtained from the NRCS web site at <http://soildatamart.nrcs.usda.org/> or from the COGCC web site GIS Online map page found at <http://colorado.gov/cogcc>. Instructions are provided within the COGCC web site help section.

NRCS Map Unit Name: Map Unit 39: Fughes-Hesperus Complex, 3 to 12 % slopes  
 NRCS Map Unit Name: Map Unit 47: Emperdrado, moist-Pagoda complex, 5 to 35% slopes  
 NRCS Map Unit Name: \_\_\_\_\_

### PLANT COMMUNITY:

Complete this section only if any portion of the disturbed area of the location's current land use is on non-crop land.

Are noxious weeds present: Yes  No

Plant species from:  NRCS or,  field observation Date of observation: \_\_\_\_\_

List individual species: \_\_\_\_\_

Check all plant communities that exist in the disturbed area.

- Disturbed Grassland (Cactus, Yucca, Cheatgrass, Rye)
- Native Grassland (Bluestem, Grama, Wheatgrass, Buffalograss, Fescue, Oatgrass, Brome)
- Shrub Land (Mahogany, Oak, Sage, Serviceberry, Chokecherry)
- Plains Riparian (Cottonwood, Willow, Aspen, Maple, Poplar, Russian Olive, Tamarisk)
- Mountain Riparian (Cottonwood, Willow, Blue Spruce)
- Forest Land (Spruce, Fir, Ponderosa Pine, Lodgepole Pine, Juniper, Pinyon, Aspen)
- Wetlands Aquatic (Bullrush, Sedge, Cattail, Arrowhead)
- Alpine (above timberline)
- Other (describe): \_\_\_\_\_

## WATER RESOURCES

Is this a sensitive area:  No  Yes

Distance to nearest

downgradient surface water feature: 1194 Feet

water well: 1231 Feet

Estimated depth to ground water at Oil and Gas Location 52 Feet

Basis for depth to groundwater and sensitive area determination:

Ground water depth based on nearest water well depth.  
No established water channel at the 29-07 pad location.

Is the location in a riparian area:  No  Yes

Was an Army Corps of Engineers Section 404 permit filed  No  Yes If yes attach permit.

Is the location within a Rule 317B Surface Water Supply Area buffer No  
zone:

If the location is within a Rule 317B Surface Water Supply Area buffer have all public water supply systems within 15 miles been notified: \_\_\_\_\_

Is the Location within a Floodplain?  No  Yes Floodplain Data Sources Reviewed (check all that apply)

Federal (FEMA)

State

County

Local

Other \_\_\_\_\_

## GROUNDWATER BASELINE SAMPLING AND MONITORING AND WATER WELL SAMPLING

Water well sampling required per Rule 609

## DESIGNATED SETBACK LOCATION EXCEPTIONS

Check all that apply:

- Rule 604.a.(1)A. Exception Zone (within 500' of a Building Unit) and is in an Urban Mitigation Area
- Rule 604.b.(1)A. Exception Location (existing or approved Oil & Gas Location now within a Designated Setback as a result of Rule 604.a.)
- Rule 604.b.(1)B. Exception Location (existing or approved Oil & Gas Location is within a Designated Setback due to Building Unit construction after Location approval)
- Rule 604.b.(2) Exception Location (SUA or site-specific development plan executed on or before August 1, 2013)
- Rule 604.b.(3) Exception Location (Building Units constructed after August 1, 2013 within setback per an SUA or site-specific

development plan)

### RULE 502.b VARIANCE REQUEST

Rule 502.b. Variance Request from COGCC Rule or Spacing Order Number \_\_\_\_\_

ALL exceptions and variances require attached Request Letter(s). Refer to applicable rule for additional required attachments (e.g. waivers, certifications, SUAs).

### OPERATOR COMMENTS AND SUBMITTAL

Comments The Piceance 29-07 pad (#334436) is being amended to add 3 new well slots for the Piceance Federal 29-01W, Piceance 29-01E and Piceance 29-02E wells.

In addition, wells that were planned to be drilled from the proposed Piceance 29-11 (#444147) pad will now be drilled from the 29-07 pad. Six of these wells will have a new Form 2 and a new BLM APD submitted (listed on the Related Items tab); the remaining wells will have COGCC and BLM sundry forms submitted to change the SHLs and/or BHLs. By not building the 29-11 pad and access road, surface disturbance will be reduced by approximately 12 acres. After the amended 2A and all associated Form 2s have been submitted, a Form 4 Sundry Notice will be submitted to AL the Piceance 29-11 pad.

Note: This amended 2A includes the originally submitted BMPs as well as the original COAs which are listed in the BMPs at the request of Dave Kubezco (original Form 2A doc #400819843).

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

Signed: \_\_\_\_\_ Date: \_\_\_\_\_ Email: jproulx@laramie-energy.com

Print Name: Joan Proulx Title: Office Manager

Based on the information provided herein, this Application for Permit-to-Drill complies with COGCC Rules and applicable orders and is hereby approved.

COGCC Approved: \_\_\_\_\_ Director of COGCC Date: \_\_\_\_\_

### Conditions Of Approval

**All representations, stipulations and conditions of approval stated in this Form 2A for this location shall constitute representations, stipulations and conditions of approval for any and all subsequent operations on the location unless this Form 2A is modified by Sundry Notice, Form 4 or an Amended Form 2A.**

COA Type	Description

### Best Management Practices

No	BMP/COA Type	Description
1	Wildlife	<p>LARAMIE ENERGY, LLC</p> <p>Best Management Practices (BMP's) To Reduce Impacts to Wildlife on the Piceance 29-07 Pad For Operations in Section 29, Township 9S, Range 93W 6th PM Mesa County, CO</p> <p>COGCC Mapping indicates: ** NO RSO (Restricted Surface Occupancy) on the Piceance 29-07 Pad ** SWH (Elk Winter Range and Black Bear) on the Piceance 29-07 Pad</p> <p>In an effort to minimize the impacts to wildlife, the following BMP's are part of Laramie Energy's standard operating procedures for drilling and operations within the Piceance Basin. This list is a partial of Laramie Energy's policy.</p> <p>Initial Stages for Infrastructure and Roads</p> <p>1. Road design and General - No firearms, no dogs on location, and no feeding of wildlife.</p>

- Minimize the amount of traffic on lease roads within 3 hours of sunrise and sunset.
- Use existing routes as much as possible to avoid new disturbance and habitat fragmentation and minimize new road construction.
- Maximize the topography as much as possible in designing roads to reduce, visual, noise, impacts, etc.
- Participate in road sharing agreements with other Operators when possible.
- Design and surface roads based on the traffic, speed, and type of vehicles to reduce, dust, mud, and environmental damage.
- Locate roads away from riparian areas and bottoms of drainages as much as possible or re-route entirely.
- Obtain Army Corp of Engineer Permits for any stream crossings prior to construction.
- Analyze crossings and flow characteristics to determine the best method of crossing, (i.e. culvert, bridge, or low water).
- Armor all stream crossings to reduce erosion and to comply with Stormwater Requirements.
- Implementation of fugitive dust control measures including but not limited to water or magnesium chloride applications, and road surfacing.
- Limit traffic to the minimum needed for safe and efficient operations.
- No driving or parking off of disturbed areas.
- Install and use locked gates or other means when allowed by landowner or Federal Agencies to prevent unauthorized travel on roads and rights-of ways.

## 2. Well pad design and location

- Locate well pads to maximize directional drilling practices. PE currently plans and attempts to locate pads for the maximum number of wells which can safely be developed from each pad. This is normally 16-20 wells per pad which equates to roughly 4 well pads per section.
- Design each location to accommodate both current and future gas production.
- Locate well pads to minimize disturbance yet maximize use to reduce surface impacts.
- Review State and Federal GIS mapping to avoid Sensitive Wildlife Habitat (SWH), Restricted Surface Occupancy (RSO) areas, steep slopes, etc., as much as possible with roads and pad location.
- Design and install gathering lines within the disturbed area of new roads and adjacent to as much as possible to reduce disturbance construction.
- Design Rights-of Way widths to the minimum needed for safe and efficient construction of pipelines
- Remote Telemetry for production operations

## 3. Drilling and Production Operations

- Implement remote telemetry in all operations
- Where topographically possible and subject to landowner approval, use centralized water gathering and transportation systems.
- Install exclusionary devices to prevent bird and other wildlife access to equipment stacks, vents, and openings.
- Locate facilities to minimize visual effects (e.g. paint color, screening, etc.)
- PE implements a dewatering system in its operations. No fluid pits are constructed or used during drilling or completion operations.
- PE implements an aggressive weed management program. PE incorporates and uses the BLM Colorado River Valley Field Office's "Noxious and Invasive Weed Management Plan for Oil and Gas Operators- March 2007" for all operations. Each spring, Laramie Energy inventories all pads, roads, and pipelines to insure no noxious weeds have been introduced. If noxious weeds are found, the county will be notified and the weeds will be treated. Weeds are continuously monitored and treated throughout the growing season. Only herbicides approved by the EPA and State are used by certified weed applicators.

## 4. Reclamation

- Strip and segregate topsoil from other soil horizons during pad, road, and pipeline construction.
- Minimize topsoil degradation by windrowing no higher than 5 feet when possible.
- Immediately seed topsoil to reduce erosion and prevent weed establishment and

maintain soil microbial activity.

- Use only certified weed free native seed mixes, unless recommended otherwise by Federal Agencies or the Landowner.
- Use locally adapted seed when available.
- Use diverse seed mixes to mirror the surrounding area unless recommended otherwise by Federal Agencies or the Landowner.
- Monitor re-vegetation success until a minimum of 75% of preferred perennial plant cover (no weeds) is established.
- Perform "interim" reclamation on all disturbed areas not needed for active producing operations.
- If possible, conduct interim and final reclamation during optimum periods (e.g. late fall/early winter or early spring).
- If needed, fence reclaimed areas to minimize livestock/wildlife impact until plant species have are capable of sustaining grazing.

LARAMIE ENERGY, LLC  
 BMPS FOR  
 Sensitive Wildlife Habitat and Restricted Surface Occupancy  
 Areas Specific to Laramie Energy, LLC  
 Operations Within the Piceance Basin  
 Mesa County, CO

Sensitive Wildlife Habitat (SWH)

Black Bear

- Initiate a food and waste/refuse management program that uses bear-proof food storage containers and trash receptacles.
- Initiate an education program that reduces bear conflicts.
- Establish policy to prohibit keeping food and trash in sleeping quarters.
- Establish policy to support enforcement of state prohibition on feeding of black bear.
- Report bear conflicts immediately to CPW.

Signature Wayne P. Bankert Date \_\_\_\_\_  
5/31/2016  
 Wayne P. Bankert  
 Regulatory & Environmental Manager

2	Storm Water/Erosion Control	CDPHE Stormwater Certification Number COR03K454 for North Vega Project Area will be amended to include this location and access.
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3	Drilling/Completion Operations	<p>Location #334436 Original Form 2A (doc #400819843) COAs:</p> <p>-Notify the COGCC 48 hours prior to start of pad construction, rig mobilization, spud, pipeline testing, start of hydraulic stimulation operations, and start of flowback operations (if different than the start of hydraulic stimulation operations) using Form 42 (the appropriate COGCC individuals will automatically be email notified, including the LGD for hydraulic stimulation operations).</p> <p>-Operator must ensure secondary containment for any volume of fluids contained at tank site during operations (as shown on the Proposed BMPs and the Construction Layout Drawings attachments); including, but not limited to, construction of a berm of diversion dike, diversion/collection trenches within and/or outside of berm/dikes, site grading, or other comparable measure (i.e., best management practices (BMPs) associated with stormwater management) sufficiently protective of nearby surface water. Any berm constructed at the well pad location will be stabilized, inspected at regular intervals (at least every 14 days and after significant precipitation events, and/or in accordance with CDPHE regulations), and maintained in good condition. The location is in an area of moderate to high run-on/run-off potential; therefore standard stormwater BMPs must be implemented at this location prior to construction, throughout construction, drilling, and completion operations to insure compliance with CDPHE and COGCC requirements and to prevent any stormwater run-on and/or stormwater run-off.</p> <p>The access road will be constructed and maintained as to not allow any sediment to migrate from the access road to nearby surface water or any drainages leading to surface water.</p> <p>Strategically apply fugitive dust control measures, including enforcing established speed limits on private roads, to reduce fugitive dust and coating of vegetation and deposition in water sources.</p> <p>Berms or other containment devices shall be constructed to be sufficiently impervious (corrugated steel with poly liner) to contain any spilled or released material around crude oil, condensate, and produced water storage tanks.</p> <p>-The moisture content of drill cuttings managed onsite shall be kept as low as practicable to prevent accumulation of liquids greater than de minimis amounts. After drilling and completion operations have been completed, the drill cuttings that will remain on the well pad location (cuttings management area, the cut portion of the pad, cuttings trench, dry cuttings drilling pit), must meet the applicable standards to Table 910-1. Land-farming of E&amp;P waste is prohibited on the location; however, this shall not preclude onsite disposal of E&amp;P waste in accordance with COGCC Rules and permit conditions. After the drill cuttings have been amended (if necessary) and placed on the well pad, sampling frequency of the drill cuttings (to be determined by the operator) shall be representative of the material left on location. No offsite disposal of cuttings to another oil and gas location shall occur without prior approval of an amended Waste Management Plan (submitted via a Form 4 Sundry Notice) specifying disposal location and waste characterization method. Commercial disposal of drill cuttings will only require notification to COGCC via a Form 4 Sundry Notice.</p> <p>If the wells are to be hydraulically stimulated, flowback and stimulation fluids must be sent to tanks, separators, or other containment/filtering equipment before the fluids can be placed into any pipeline or storage vessel located on the well pad; or into tanker trucks for offsite disposal. The flowback and stimulation fluid tanks, separators, or other containment/filtering equipment must be placed on the well pad in an area constructed to be sufficiently impervious to contain any spilled or released material. Potential odors associated with the completions process and/or with long term production operations must be controlled/mitigated.</p> <p>-Operator shall pressure test pipelines in accordance with Rule 1101.e.(1) prior to putting into initial service any temporary surface or permanent buried pipelines and following any reconfiguration of the pipeline network.</p> <p>Operator will utilize, to the extent practical, all existing access and other public roads, and/or existing pipeline right-of-ways, when placing/routing the surface pipelines. This will reduce surface disturbance and fragmentation of wildlife habitat in the area.</p>
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Total: 3 comment(s)

## Attachment Check List

<u>Att Doc Num</u>	<u>Name</u>
401118187	MULTI-WELL PLAN
401118200	LOCATION DRAWING
401118201	CONST. LAYOUT DRAWINGS

Total Attach: 3 Files

### General Comments

<u>User Group</u>	<u>Comment</u>	<u>Comment Date</u>

Total: 0 comment(s)



**Public Comments**

No public comments were received on this application during the comment period.

