

FORM

2

Rev
08/16

State of Colorado

Oil and Gas Conservation Commission

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

Document Number:

401139913

APPLICATION FOR PERMIT TO:

☒ Drill
 ☐ Deepen
 ☐ Re-enter
 ☐ Recomplete and Operate

Date Received:

11/16/2016

TYPE OF WELL OIL ☐ GAS ☒ COALBED ☐ OTHER _____Refilling ☐ZONE TYPE SINGLE ZONE ☒ MULTIPLE ZONES ☐ COMMINGLE ZONES ☐Sidetrack ☐

Well Name: Piceance Federal

Well Number: 29-20E

Name of Operator: LARAMIE ENERGY LLC

COGCC Operator Number: 10433

Address: 1401 SEVENTEENTH STREET #1400

City: DENVER State: CO Zip: 80202

Contact Name: Joan Proulx

Phone: (970)263-3641

Fax: ()

Email: jproulx@laramie-energy.com

RECLAMATION FINANCIAL ASSURANCE

Plugging and Abandonment Bond Surety ID: 20120081

WELL LOCATION INFORMATION

QtrQtr: SENE Sec: 29 Twp: 9S Rng: 93W Meridian: 6

Latitude: 39.248406

Longitude: -107.788322

Footage at Surface: 2533 Feet FNL/FSL FNL 1288 Feet FEL/FWL FEL

Field Name: BUZZARD CREEK

Field Number: 9500

Ground Elevation: 7531

County: MESA

GPS Data:

Date of Measurement: 04/22/2015 PDOP Reading: 1.2 Instrument Operator's Name: Glen McElroy

If well is ☒ Directional ☐ Horizontal (highly deviated) **submit deviated drilling plan.**

Footage at Top of Prod Zone: FNL/FSL FNL/FWL Bottom Hole: FNL/FSL FEL/FWL

 551 FSL 1306 FEL 551 FSL 1306 FEL
 Sec: 29 Twp: 9S Rng: 93W Sec: 29 Twp: 9S Rng: 93W

LOCATION SURFACE & MINERALS & RIGHT TO CONSTRUCT

Surface Ownership: ☒ Fee ☐ State ☐ Federal ☐ IndianThe Surface Owner is: ☒ is the mineral owner beneath the location.

(check all that apply)

☐ 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 by this Well: No

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

Surface damage assurance if no agreement is in place:

Surface Surety ID:

LEASE INFORMATION

Using standard QtrQtr, Sec, Twp, Rng format, describe one entire mineral lease that will be produced by this well (Describe lease beneath surface location if produced. Attach separate description page or map if necessary.)

Section 29 Communitized: CA No. COC-76682
Federal Lease COC 64786
Township 9S Range 93W 6th PM Mesa County, CO
Sec. 27: W2W2, NENW
Sec. 28: E2, NENW
Sec. 29: W2W2, SESW, S2SE
Sec. 30: SESW, Lot 4

Total Acres in Described Lease: 921 Described Mineral Lease is: ☐ Fee ☐ State ☒ Federal ☐ Indian

Federal or State Lease # COC 64786

Distance from Completed Portion of Wellbore to Nearest Lease Line of described lease: 551 Feet

CULTURAL DISTANCE INFORMATION

Distance to nearest:

Building: 1231 Feet
Building Unit: 4155 Feet
High Occupancy Building Unit: 5280 Feet
Designated Outside Activity Area: 5280 Feet
Public Road: 5280 Feet
Above Ground Utility: 509 Feet
Railroad: 5280 Feet
Property Line: 1288 Feet

INSTRUCTIONS:

- All measurements shall be provided from center of the Proposed Well to nearest of each cultural feature as described in Rule 303.a.(5).
- Enter 5280 for distance greater than 1 mile.
- 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.

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.

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: _____

SPACING and UNIT INFORMATION

Distance from completed portion of proposed wellbore to nearest completed portion of offset wellbore permitted or completed in the same formation: 210 Feet

Distance from Completed Portion of Wellbore to Nearest Unit Boundary 551 Feet (Enter 5280 for distance greater than 1 mile.)

Federal or State Unit Name (if appl): _____ Unit Number: _____

SPACING & FORMATIONS COMMENTS

Communitized under COC 076682
Federal Lease #COC 064786
T9S Range 93W 6th PM Mesa County, CO
Sec 27: W2W2, NENW
Sec 28: E2, NENW
Sec 29: W2W2, SESW, S2SE
Sec 30: SESW, Lot 4

OBJECTIVE FORMATIONS

Objective Formation(s)	Formation Code	Spacing Order Number(s)	Unit Acreage Assigned to Well	Unit Configuration (N/2, SE/4, etc.)
WILLIAMS FORK-ILES	WFILS	399-10	640	All

DRILLING PROGRAM

Proposed Total Measured Depth: 8131 Feet

Distance from the proposed wellbore to nearest existing or proposed wellbore belonging to another operator, including plugged wells:

Enter distance if less than or equal to 1,500 feet: _____ Feet ☒ No well belonging to another operator within 1,500 feet

Will a closed-loop drilling system be used? Yes

Is H₂S gas reasonably expected to be encountered during drilling operations at concentrations greater than or equal to 100 ppm? No (If Yes, attach an H₂S Drilling Operations Plan)

Will salt sections be encountered during drilling? No

Will salt based (>15,000 ppm Cl) drilling fluids be used? No

Will oil based drilling fluids be used? No

BOP Equipment Type: ☒ Annular Preventor ☒ Double Ram ☒ Rotating Head ☐ None

GROUNDWATER BASELINE SAMPLING AND MONITORING AND WATER WELL SAMPLING

Water well sampling required per Rule 609

DRILLING WASTE MANAGEMENT PROGRAM

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

Cuttings Disposal: ONSITE Cuttings Disposal Method: Cuttings trench

Other Disposal Description:

Cuttings will be tested to Table 910 standards and will be buried on location. Drilling mud will be recycled/re-used in other drilling operations. Once all drilling operations are completed, drilling mud will be sent to a commercial disposal facility.

Beneficial reuse or land application plan submitted? _____

Reuse Facility ID: _____ or Document Number: _____

CASING PROGRAM

Casing Type	Size of Hole	Size of Casing	Wt/Ft	Csg/Liner Top	Setting Depth	Sacks Cmt	Cmt Btm	Cmt Top
CONDUCTOR	26+0/0	16+0/0	112	0	60	100	60	0
SURF	11+0/0	8+5/8	24	0	1530	296	1530	0
1ST	7+7/8	4+1/2	11.6	0	8131	1367	8131	1030

☐ Conductor Casing is NOT planned

DESIGNATED SETBACK LOCATION EXCEPTIONS

Check all that apply:

- ☐ Rule 604.a.(1)A. Exception Zone (within 500' of Building Unit)
- ☐ 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)

GREATER WATTENBERG AREA LOCATION EXCEPTIONS

Check all that apply:

- ☐ Rule 318A.a. Exception Location (GWA Windows).

☐ Rule 318A.c. Exception Location (GWA Twinning).

RULE 502.b VARIANCE REQUEST

☐ Rule 502.b. Variance Request from COGCC Rule or Spacing Order Number _____

OTHER LOCATION EXCEPTIONS

Check all that apply:

☐ Rule 318.c. Exception Location from Rule or Spacing Order Number _____

☐ Rule 603.a.(2) Exception Location (Property Line Setback).

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 existing Gunderson 29-09 pad (#334426) is being amended to add 7 new wells which originally were planned (but were never permitted) to be drilled from the proposed Piceance 29-11 (#444147) pad. By not building the 29-11 pad and access road, surface disturbance will be reduced by approximately 12 acres. The first two pages of the BLM permit are attached; the permit is 25 pages long.

This application is in a Comprehensive Drilling Plan No CDP #: _____

Location ID: 334426

Is this application being submitted with an Oil and Gas Location Assessment application? Yes

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

Signed: _____ Print Name: Joan Proulx

Title: Regulatory Analyst Date: 11/16/2016 Email: jproulx@laramie-energy.com

Operator must have a valid water right or permit allowing for industrial use or purchased water from a seller that has a valid water right or permit allowing for industrial use, otherwise an application for a change in type of use is required under Colorado law. Operator must also use the water in the location set forth in the water right decree or well permit, otherwise an application for a change in place of use is required under Colorado law. Section 37-92-103(5), C.R.S. (2011).

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: 2/6/2017

Expiration Date: 02/05/2019

API NUMBER

05 077 10363 00

Conditions Of Approval

All representations, stipulations and conditions of approval stated in the Form 2A for this location shall constitute representations, stipulations and conditions of approval for this Form 2 Permit-to-Drill and are enforceable to the same extent as all other representations, stipulations and conditions of approval stated in this Permit-to-Drill.

COA Type

Description

	<p>1)Operator shall comply with the most current revision of the Northwest Colorado Notification Policy.</p> <p>2)Operator shall comply with the Notice to Operators Drilling Wells in the Buzzard, Mamm Creek, and Rulison fields, Garfield County and Mesa County – Procedures and Submittal Requirements for Compliance with COGCC Order Nos. 1-107, 139-56, 191-22, and 369-2 (July 8, 2010).</p> <p>3)Operator shall provide cement coverage from the production casing shoe (4+1/2" FIRST STRING) to a minimum of 200' above the Lower Wasatch (as defined by COGCC in the report "Casing and Cement Standards for Geologic Isolation Piceance Basin Bradenhead Monitoring Area and Nearby Fields," dated April 18, 2016, COGCC Document No. 2056199, Appendix A Field Scout Cards and Annotated Type Logs) to provide isolation of the Lower Wasatch, all Mesaverde Group formations including the Ohio Creek Formation, and underlying formations, if penetrated. Verify production casing cement coverage with a cement bond log. This requirement shall supersede the top of cement requirements in the Mamm Creek Field Notice to Operators.</p> <p>4)The Operator shall monitor the bradenhead pressure of the proposed well and all offset wells under Operator's control which penetrate the stimulated formation and have a treated interval separation of 300 feet or less. Monitoring shall occur from 24 hours prior to stimulation and shall continue until 24 hours after stimulation is complete. Recording shall be at a frequency of at least once per 24 hours with the capability of recording the maximum pressure observed during each 24 hour period. Operator shall notify COGCC Engineering staff if bradenhead pressures increase by more than 200 psig.</p>
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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 Gunderson 29-09 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 Gunderson 29-09 Pad ** SWH (Elk Winter Range and Black Bear) on the Gunderson 29-09 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</p> <ul style="list-style-type: none"> - No firearms, no dogs on location, and no feeding of wildlife. - 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,
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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

		<p>cover (no weeds) is established.</p> <ul style="list-style-type: none"> - 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.
2	Wildlife	<p>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</p> <p>Sensitive Wildlife Habitat (SWH)</p> <p>Black Bear</p> <ul style="list-style-type: none"> • 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 . <p>Signature __ Wayne P. Bankert _____ Date 5/31/2016 Wayne P. Bankert Piceance Reg. & Env. Manager</p>
3	Drilling/Completion Operations	<p>BMP Type: Drilling/Completion Operations</p> <p>One of the first wells drilled on the pad will be logged open-hole with a triple combo log (HRI w/SP, GR, CAL and Spectral Density/Dual Spaced Neutron) from TD into the surface casing. All wells on the pad will have a radial analysis bond log with gamma-ray run on production casing from TD to surface after the rig moves off the pad. All wells not logged with an open hole log will have a cased hole NEO neutron emulated open hole log run from TD to surface. The Form 5, Drilling Completion Report, for each well on the pad will list all logs run and have those logs attached. The Form 5 for a well without open-hole logs shall clearly state "No open-hole logs were run" and shall clearly identify (by API #, well name and number) the well in which open-hole logs were run.</p>

Total: 3 comment(s)

Applicable Policies and Notices to Operators

Policy
<p>NW Colorado Notification Policy. http://cogcc.state.co.us/documents/reg/Policies/nw_notification_procedures.pdf</p>
<p>Bradenhead Pressure Reporting-Garfield County (Mamm Creek & Rulison Fields) Mesa County (Buzzard Field). http://cogcc.state.co.us/documents/reg/Policies/NT0_07082010.pdf</p>
<p>Notice Concerning Operating Requirements for Wildlife Protection. http://cogcc.state.co.us/documents/reg/Policies/Wildlife_Notice.pdf</p>

Attachment Check List

<u>Att Doc Num</u>	<u>Name</u>
2168243	WELL LOCATION PLAT
2168244	DEVIATED DRILLING PLAN
401139913	FORM 2 SUBMITTED
401147624	TOPO MAP
401150926	FED. DRILLING PERMIT
401200026	DIRECTIONAL DATA

Total Attach: 6 Files

General Comments

<u>User Group</u>	<u>Comment</u>	<u>Comment Date</u>
Permit	Attached new well location plat, Directional Survey and changed lat/long of SHL to match. BHL remains the same. Removed previous submittals of the same. Corrected proposed TD from 8130 TO 8131 with operator approval. Corrected distance to the nearest building unit from 5280 to 4166' with operator approval. Final review complete.	02/01/2017
Permit	Corrected the number of wells added to pad from 6 to 7 with operator approval. Corrected the cuttings disposal method to match the 2A as per operator. Preliminary review complete.	01/10/2017
Engineer	Evaluated existing offset oil and gas wells within 1,500 feet of this wellbore. No mitigation required. Offset water well check: COGCC evaluated offset water wells within one mile of this proposed well's surface hole location. This information was used in addition to locally-available geophysical logs and hydrogeologic information to evaluate the adequacy of the operator's proposed surface casing setting depth. The deepest water well within one mile is 485 feet. Revised Other Disposal Description per operator.	11/28/2016
Permit	Passed completeness.	11/23/2016
Permit	Corrected Date of Measurement and Instr. Op.'s Name with Operator's Permission.	11/23/2016
Permit	Per Operator Request, removed last statement on the Submit Tab pertaining to a Form 4 submittal. It was unrelated to these 2s/2A.	11/21/2016

Total: 6 comment(s)