

FORM

2

Rev
02/20

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:

402348014

APPLICATION FOR PERMIT TO:

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

Date Received:

04/23/2020

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

Well Name: Bernhardt

Well Number: 5-04N-14A-L

Name of Operator: PDC ENERGY INC

COGCC Operator Number: 69175

Address: 1775 SHERMAN STREET - STE 3000

City: DENVER State: CO Zip: 80203

Contact Name: Ally Ota

Phone: (303)860-5800

Fax: ()

Email: alexandria.ota@pdce.com

RECLAMATION FINANCIAL ASSURANCE

Plugging and Abandonment Bond Surety ID: 20160047

WELL LOCATION INFORMATION

QtrQtr: NWNW Sec: 18 Twp: 4N Rng: 66W Meridian: 6

Latitude: 40.317618

Longitude: -104.828430

Footage at Surface: 578 Feet FNL/FSL FNL 357 Feet FEL/FWL FWL

Field Name: WATTENBERG

Field Number: 90750

Ground Elevation: 4739

County: WELD

GPS Data: GPS Quality Value: 1.2 Type of GPS Quality Value: PDOP Date of Measurement: 11/10/2016

Instrument Operator's Name: Aaron Rivera

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 FNL/FWL

776

FNL

150

FEL

816

FNL

360

FWL

Sec: 13

Twp: 4N

Rng: 67W

Sec: 14

Twp: 4N

Rng: 67W

LOCAL GOVERNMENT INFORMATION

County: WELD

Municipality: Milliken

Per § 34-60-106 (1)(f)(I)(A), the following questions pertain to the "local government with jurisdiction to approve the siting of the proposed oil and gas location."

The local government with jurisdiction is: Municipality

Does the local government with jurisdiction regulate the siting of Oil and Gas Locations, with respect to this location? If the local government does regulate the siting, but has waived its right to precede the COGCC in siting determination, indicate by selecting "YES" here and selecting "Waived" for the disposition below.

☒ Yes ☐ NoIf yes, in checking this box, I hereby certify that an application has been filed with the local government with jurisdiction to approve the siting of the proposed oil and gas location. ☒

The local government siting permit type is: USR

The local government siting permit was filed on: 04/24/2017

The disposition of the application filed with the local government is: Approved

Additional explanation of local process:

USR (Resolution No. PC17-02) approved 10/4/2017

LOCATION SURFACE & MINERALS & RIGHT TO CONSTRUCT

Surface Ownership: ☒ Fee ☐ State ☐ Federal ☐ Indian

The 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: Yes

The right to construct the Oil and Gas Location is granted by: Surface Use Agreement

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.)

T4N-R66W Section 18: W2NW, among other lands

Total Acres in Described Lease: 811 Described Mineral Lease is: ☒ Fee ☐ State ☐ Federal ☐ Indian

Federal or State Lease # _____

Distance from Completed Portion of Wellbore to Nearest Lease Line of described lease: 0 Feet

CULTURAL DISTANCE INFORMATION

Distance to nearest:

Building: 541 Feet

Building Unit: 1098 Feet

High Occupancy Building Unit: 2613 Feet

Designated Outside Activity Area: 5280 Feet

Public Road: 341 Feet

Above Ground Utility: 320 Feet

Railroad: 460 Feet

Property Line: 357 Feet

School Facility: 2925 Feet

School Property Line: 2728 Feet

Child Care Center: 2613 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, Designated Outside Activity Area, School Facility, and Child Care Center – 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: 10/22/2018

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: 130 Feet

Distance from Completed Portion of Wellbore to Nearest Unit Boundary 460 Feet (Enter 5280 for distance greater than 1 mile.)

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

SPACING & FORMATIONS COMMENTS

Proposed Spacing Unit: T4N-R66W Section 18: NWNW;T4N-67W Section 13: N2N2; Section 14: N2N2, PSU attached

If this Form 2 is associated with a Drilling and Spacing Unit application, provide docket number: _____

OBJECTIVE FORMATIONS

Objective Formation(s)	Formation Code	Spacing Order Number(s)	Unit Acreage Assigned to Well	Unit Configuration (N/2, SE/4, etc.)
NIOBRARA	NBRR		360	GWA

DRILLING PROGRAM

Proposed Total Measured Depth: 17366 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: 75 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? Yes

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 318A

DRILLING WASTE MANAGEMENT PROGRAM

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

Cuttings Disposal: OFFSITE Cuttings Disposal Method: Commercial Disposal

Other Disposal Description:

The surface hole will be drilled with water based mud and the production hole will be drilled with oil based mud. Water based drilling fluid and cuttings will be land applied at PDC spread fields with COGCC Facility ID 449950 or 461014.

Beneficial reuse or land application plan submitted? Yes

Reuse Facility ID: 461014 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
SURF	12+1/2	9+5/8	36	0	1600	920	1600	0
1ST	8+1/2	5+1/2	20	0	17366	2035	17366	

☒ 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 This well has a bottom-hole location beyond the unit boundary setback. The bottom of the completed interval will be within the unit boundary setback at 815' FNL, 460' FWL, Section 14. The wellbore beyond the unit boundary setback will be physically isolated and will not be completed.

The distance to the completed portion of the nearest well on the "Spacing and Formations" tab was measured to the Bernhardt 13-12 (05-123-17357). The distance to the nearest wellbore belonging to another operator on the "Drilling & Waste Plans" tab was measured to the Maury O 13-3 (05-123-20200) Both distances were measured via the anti-collision report.

The subject well will have a treated interval less than 150' from the treated interval of the Bernhardt 13-12 (05-123-17357) owned by Noble. Please see the Rule 317.s Stimulation Setback Consent attached.

PDC Energy is the successor in interest to SRC Energy, Inc. The subject location was one of several locations that PDC Energy inherited from SRC Energy, Inc, effective 1/14/2020. Some attachments for this location may still reference SRC Energy, Inc.

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

Location ID: 466367

Is this application being submitted with an Oil and Gas Location Assessment application? _____ No _____

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

Signed: _____ Print Name: Ally Ota

Title: Regulatory Analyst Date: 4/23/2020 Email: alexandria.ota@pdce.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, applicable orders, and SB 19-181 and is hereby approved.

COGCC Approved:  Director of COGCC Date: 7/24/2020

Expiration Date: 07/23/2022

API NUMBER

05 123 51138 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
Drilling/Completion Operations	<p>Per COGCC Order 1-232, Bradenhead tests shall be performed according to the following schedule and Form 17 submitted within 10 days of each test:</p> <ol style="list-style-type: none"> 1) Within 60 days of rig release, prior to stimulation. If any pressure greater than 200 psi, must contact COGCC engineer prior to stimulation. 2) If a delayed completion, 6 months after rig release and prior to stimulation. If any pressure greater than 200 psi, must contact COGCC engineer prior to stimulation. 3) A post-production test within 60 days after first sales, as reported on the Form 10, Certificate of Clearance.
Drilling/Completion Operations	<ol style="list-style-type: none"> 1) Submit Form 42 electronically to COGCC 48 hours prior to MIRU (spud notice) for the first well activity with a rig on the pad and provide 48 hour spud notice via Form 42 for all subsequent wells drilled on the pad. 2) Comply with Rule 317.j. and provide cement coverage from TD to a minimum of 200' above Niobrara and from 200' below Sussex to 200' above Sussex. Verify coverage with cement bond log. 3) Oil-based drilling fluid is to be used only after all fresh water aquifers are covered.
Drilling/Completion Operations	<p>Operator acknowledges the proximity of the listed wells. Operator agrees to: provide mitigation option 1 or 2 (per the DJ Basin Horizontal Offset Policy) to mitigate the situation, ensure all applicable documentation is submitted based on the selected mitigation option chosen, and submit a Form 42 ("OFFSET MITIGATION COMPLETED") stating that appropriate mitigation occurred and that it has been completed, prior to the hydraulic stimulation of this well.</p> <p>123-12546 EHRlich *6-18 123-12763 EHRlich *3-18 123-22655 BERNHARDT *7-14</p> <p>Operator acknowledges the proximity of the listed non-operated wells. Operator assures that this offset list will be remediated per the DJ Basin Horizontal Offset Policy (option 3). Operator will submit a Form 42 ("OFFSET MITIGATION COMPLETED") stating what appropriate mitigation occurred and that it has been completed, prior to the hydraulic stimulation of this well.</p> <p>123-19805 BERNHARDT *13A</p> <p>Operator acknowledges the proximity of the listed wells. Operator assures that these offsets will be remediated per the DJ Basin Horizontal Offset Policy (option 4). Operator will submit a Form 42 ("OTHER- AS SPECIFIED BY PERMIT CONDITION") stating that appropriate mitigation will be completed, during the hydraulic stimulation of this well. This Form 42 shall be filed 48 hours prior to stimulation. Surface and production casing pressures will be actively monitored during stimulation. Operator will assure that the offset well's Bradenhead is monitored during the entire stimulation treatment – a Bradenhead test will be performed prior to the beginning of stimulation. If there is any indication of communication between the stimulation treatment and the offset well, treatment will be stopped and COGCC Engineering notified. After stimulation is complete, a Form 4 Sundry shall be submitted for the offset well on describing how Option 4 work was completed and include a summary of the monitoring details.</p> <p>123-38069 Five Rivers *K18-69HN 123-38257 Five Rivers *K07-63-1HN 123-39937 Stroh *13G-203 123-42337 Spaur *10T-421</p>
Drilling/Completion Operations	<p>This Permit to Drill is approved subject to all the BMPs and COAs on the most recently approved Form 2A and any subsequently approved Form 4 for the Oil and Gas Location (Location ID # 466367). The most recently approved Form 2A and any subsequent Form 4s containing applicable COAs for this location shall be posted on site during construction, drilling, and completions operations.</p>

Drilling/Completion Operations	Operator will ensure the wellbore beyond the unit boundary setback is physically isolated and is not completed. In the Operator Comments on the Form 5A the operator will (1) report the footages from the section lines of the bottom of the completed interval (2) describe how the wellbore beyond the unit boundary setback is physically isolated and (3) certify that none of the wellbore beyond the setback was completed.
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Best Management Practices

No	BMP/COA Type	Description
1	Drilling/Completion Operations	Operator will perform an anti-collision evaluation of all active (producing, shut in, or temporarily abandoned) offset wellbores that have the potential of being within 150 feet of a proposed well prior to drilling operations for the proposed well. Notice shall be given to all offset operators prior to drilling.
2	Drilling/Completion Operations	Operator will comply with COGCC Policy for Bradenhead Monitoring During Hydraulic Fracturing Treatments in the Greater Wattenberg Area dated May 29, 2012. The Colorado Oil and Gas Conservation Commission (COGCC) has established this Policy Regarding Bradenhead Monitoring During Hydraulic Fracturing Treatments ("Treatment") in the Greater Wattenberg Area ("GWA") pursuant to COGCC 207.a. ("Policy"). This Policy applies to oil and gas operations in the GWA as defined by the COGCC Rules of Practice and Procedure.
3	Drilling/Completion Operations	ALTERNATIVE PROGRAM: One of the first wells drilled on the pad will be logged with open-hole resistivity log and gamma-ray log from the kick-off point into the surface casing. All wells on the pad will have a cement bond log with gamma-ray run on production casing (or on intermediate casing if production liner is run) into the surface casing. The horizontal portion of every well will be logged with a measured-while-drilling gamma-ray log. The Form 5, 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 state "Alternative Logging Program - No open-hole logs were run" and shall clearly identify the type of log and the well (by API #) in which open-hole logs were run.

Total: 3 comment(s)

Applicable Policies and Notices to Operators

Notice Concerning Operating Requirements for Wildlife Protection.
http://cogcc.state.co.us/documents/reg/Policies/Wildlife_Notice.pdf

Policy for Bradenhead Monitoring During Hydraulic Fracturing Treatments in the Greater Wattenberg Area.
<http://cogcc.state.co.us/documents/reg/Policies/PolicyGwaBradenheadMonitoringFinal.pdf>

Attachment Check List

Att Doc Num	Name
402348014	APD APPROVED
402378013	DEVIATED DRILLING PLAN
402378055	DIRECTIONAL DATA
402378056	WELL LOCATION PLAT
402378058	STIMULATION SETBACK CONSENT
402378059	PROPOSED SPACING UNIT
402378061	SURFACE AGRMT/SURETY
402378062	EXCEPTION LOC REQUEST
402378776	OffsetWellEvaluations Data
402451821	OFFSET WELL EVALUATION
402451830	FORM 2 SUBMITTED
402451845	PUBLIC COMMENT-0

Total Attach: 12 Files

General Comments

<u>User Group</u>	<u>Comment</u>	<u>Comment Date</u>
Permit	Final Review Completed.	07/17/2020
Permit	Permitting review complete.	07/10/2020
Permit	Following additional analysis arising out of the Objective Criteria, the Director determined that this application meets the standard for the protection of public health, safety, and welfare and the environment, including wildlife resources set by SB 19-181. The Objective Criteria Review Memos (Doc# 2316428 & Doc# 1347938) can be found in the document file for Location ID 466367.	07/07/2020
Permit	Updated distance to High Occupancy Building Unit and Child Care Center with operator concurrence. Per operator: "Cultural distances found on well location plat are incorrect. Distances reported on Form 2 are correct."	05/01/2020
Permit	Surface Use Agreement has waivers for Rule 318A.a and 318A.c. See page 5, Paragraph 9.a.	05/01/2020
Permit	Contacted operator regarding question on discrepancy between High Occupancy Building Unit and Child Care Center cultural distances and approved 2A.	05/01/2020
Permit	Passed completeness.	05/01/2020

Total: 7 comment(s)