

FORM  
2

Rev  
05/22

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:

403162638

(SUBMITTED)

Date Received:

09/26/2022

APPLICATION FOR PERMIT TO

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

Amend ☐

TYPE OF WELL OIL ☒ GAS ☐ COALBED ☐ OTHER: \_\_\_\_\_

Refill ☐

ZONE TYPE SINGLE ZONE ☒ MULTIPLE ZONES ☐ COMMINGLE ZONES ☐

Sidetrack ☐

Well Name: Rio

Well Number: 13NA

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: regulatory@pdce.com

FINANCIAL ASSURANCE FOR PLUGGING, ABANDONMENT, AND RECLAMATION

COGCC Financial Assurance

☒ The Operator has provided or will provide Financial Assurance to the COGCC for this Well.

Surety ID Number (if applicable): 20160047

Federal Financial Assurance

☐ In checking this box, the Operator certifies that it has provided or will provide at least this amount of Financial Assurance to the federal government for this Well. (Per Rule702.a.)

Amount of Federal Financial Assurance \$ \_\_\_\_\_

WELL LOCATION INFORMATION

Surface Location

QtrQtr: NWNW Sec: 6 Twp: 1S Rng: 67W Meridian: 6

FNL/FSL

FEL/FWL

Footage at Surface: 279 Feet FNL 65 Feet FWL

Latitude: 39.999575

Longitude: -104.940104

GPS Data: GPS Quality Value: 1.5 Type of GPS Quality Value: PDOP

Date of Measurement: 06/28/2018

Ground Elevation: 5068

Field Name: WATTENBERG

Field Number: 90750

Well Plan: is ☐ Directional ☒ Horizontal (highly deviated) ☐ Vertical

If Well plan is Directional or Horizontal attach Deviated Drilling Plan and Directional Data.

Subsurface Locations

Top of Productive Zone (TPZ)

Sec: 2 Twp: 1S Rng: 68W

Footage at TPZ: 460 FNL 2155 FEL

Measured Depth of TPZ: 11642

True Vertical Depth of TPZ: 7396

FNL/FSL

FEL/FWL

**Base of Productive Zone (BPZ)**Sec: 11 Twp: 1S Rng: 68WFootage at BPZ: 460 FSL 2155 FELMeasured Depth of BPZ: 21032True Vertical Depth of BPZ: 7491 FNL/FSL FEL/FWL**Bottom Hole Location (BHL)**Sec: 11 Twp: 1S Rng: 68WFootage at BHL: 460 FSL 2155 FEL

FNL/FSL FEL/FWL

**LOCAL GOVERNMENT PERMITTING INFORMATION**County: ADAMSMunicipality: N/A

Is the Surface Location of this Well in an area designated as one of State interest and subject to the requirements of § 24-65.1-108 C.R.S.? Yes

Per § 34-60-106(1)(f)(I)(A) C.R.S., the following questions pertain to the Relevant Local Government approval of the siting of the proposed Oil and Gas Location.

SB 19-181 provides that when "applying for a permit to drill," operators must include proof that they sought a local government siting permit and the disposition of that permit application, or that the local government does not have siting regulations. § 34-60-106(1)(f)(I) (A) C.R.S.

Does the Relevant Local Government regulate the siting of Oil and Gas Locations, with respect to this Location? ☒ Yes ☐ No

☒ If 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 disposition of the application filed with the Relevant Local Government is: Approved Date of Final Disposition: 04/23/2019

Comments: **SURFACE AND MINERAL OWNERSHIP AT WELL'S OIL & GAS LOCATION**

Surface Owner of the land at this Well's Oil and Gas Location: ☒ Fee ☐ State ☐ Federal ☐ Indian

Mineral Owner beneath this Well's Oil and Gas Location: ☒ Fee ☐ State ☐ Federal ☐ Indian

Surface Owner Protection Bond (if applicable): Surety ID Number (if applicable): **MINERALS DEVELOPED BY WELL**

The ownership of all the minerals that will be developed by this Well is (check all that apply):

☒ Fee☐ State☐ Federal☐ Indian☐ N/A**LEASE INFORMATION**

Using standard QtrQtr, Section, Township, Range format describe one entire mineral lease as follows:

\* If this Well is within a unit, describe a lease that will be developed by the Well.

\* If this Well is not subject to a unit, describe the lease that will be produced by the Well.

(Attach a Lease Map or Lease Description or Lease if necessary.)

Total Acres in Described Lease: 160Described Mineral Lease is: ☒ Fee ☐ State ☐ Federal ☐ IndianFederal or State Lease #

## SAFETY SETBACK INFORMATION

Distance from Well to nearest:

Building: 506 Feet  
Building Unit: 505 Feet  
Public Road: 282 Feet  
Above Ground Utility: 277 Feet  
Railroad: 575 Feet  
Property Line: 53 Feet

### INSTRUCTIONS:

- Specify all distances per Rule 308.b.(1).
- 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 – as defined in 100 Series Rules.

## 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	407-1902	640	T1S-R68W Section 2: E2, Section 11: E2

Federal or State Unit Name (if appl):

Unit Number:

## SUBSURFACE MINERAL SETBACKS

Enter 5280 for distance greater than 1 mile.

Is this Well within a unit? Yes

If YES:

Enter the minimum distance from the Completed Zone of this Well to the Unit Boundary: 460 Feet

Enter the minimum distance from the Completed Zone of this Well to the Completed Zone of an offset Well within the same unit permitted or completed in the same formation: 505 Feet

If NO:

Enter the minimum distance from the Completed Zone of this Well to the Lease Line of the described lease: Feet

Enter the minimum distance from the Completed Zone of this Well to the Completed Zone of an offset Well producing from the same lease and permitted or completed in the same formation: Feet

## Exception Location

☒ If this Well requires the approval of a Rule 401.c Exception Location, enter the Rule or spacing order number and attach the Exception Location Request and Waivers. Order 407-1902

## SPACING & FORMATIONS COMMENTS

**DRILLING PROGRAM**Proposed Total Measured Depth: 21032 FeetTVD at Proposed Total Measured Depth 7491 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: 119 Feet ☐ No well belonging to another operator within 1,500 feetWill a closed-loop drilling system be used? YesIs H<sub>2</sub>S gas reasonably expected to be encountered during drilling operations at concentrations greater thanor equal to 100 ppm? No If yes, attach an H<sub>2</sub>S Drilling Plan unless a plan was already submitted with the Form 2A per Rule 304.c.(10).Will there be hydraulic fracture treatment at a depth less than 2,000 feet in this well? NoWill salt sections be encountered during drilling? NoWill salt based (>15,000 ppm Cl) drilling fluids be used? NoWill oil based drilling fluids be used? YesBOP Equipment Type: ☒ Annular Preventor ☒ Double Ram ☒ Rotating Head ☐ NoneBeneficial reuse or land application plan submitted? No

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

**CASING PROGRAM**

Casing Type	Size of Hole	Size of Casing	Grade	Wt/Ft	Csg/Liner Top	Setting Depth	Sacks Cmt	Cmt Btm	Cmt Top
SURF	13+1/2	9+5/8	J-55	36	0	2000	789	2000	0
1ST	8+1/2	5+1/2	P-110	20	0	21032	3826	21032	2000

☒ Conductor Casing is NOT planned**POTENTIAL FLOW AND CONFINING FORMATIONS**

Zone Type	Formation /Hazard	Top M.D.	Top T.V.D.	Bottom M.D.	Bottom T.V.D.	TDS (mg/L)	Data Source	Comment
Groundwater	Fox Hills Sandstone	580	580	950	950	1001-10000	Other	COGCC UPWQ Study
Confining Layer	Pierre Shale	950	950	1020	1020			
Groundwater	UPIR/Pawnee Aquifer	1020	1020	1450	1450	1001-10000	Other	COGCC UPWQ Study
Confining Layer	Pierre Shale	1450	1450	4410	4410			
Hydrocarbon	Parkman	4410	4410	4560	4560			
Confining Layer	Pierre Shale	4560	4560	4795	4795			
Hydrocarbon	Sussex	4795	4795	4986	4986			
Confining Layer	Pierre Shale	4986	4986	5975	5975			
Hydrocarbon	Shannon	5975	5975	6070	6070			
Confining Layer	Pierre Shale	6070	6070	11425	7376			
Subsurface Hazard	Sharon Springs Shale	11425	7376	11642	7396			
Hydrocarbon	Niobrara	11642	7396	21032	7491			

**OPERATOR COMMENTS AND SUBMITTAL**

Comments

The distance to the completed portion of the nearest well on the "Spacing and Formations" tab was measured to the Rio 14N (Doc 403164064) using COGCC GIS mapping, 2D plain view. The distance to the nearest wellbore belonging to another operator on the "Drilling Plan" tab was measured to the Sack 7-1 (05-001-09503) via the anti-collision report attached in the deviated drilling plan.

The subject well will have a treated interval less than 175' from the treated interval of the below listed wells. PDC does not plan to stimulate within 150' of these wells, therefore, no Stimulation Setback Consent is attached.  
Sack 7-11 (05-001-09503), 119', SI, KP Kauffman  
Sack G Unit 1 (05-001-08895), 130', SI, KP Kauffman

The surface owner of this location is also the encroached upon surface owner. Property line waivers are attached.

An Exception Location Request to Order No. 407-1902 is attached, requesting this well to be drilled from the Rio LC Pad to produce within the Ivey North Unit.

This application is in a Comprehensive Area Plan No CAP #: \_\_\_\_\_  
Oil and Gas Development Plan Name \_\_\_\_\_ OGDP ID#: \_\_\_\_\_  
Location ID: 465146

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: 9/26/2022 Email: alexandria.ota@pdce.com

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: \_\_\_\_\_  
Expiration Date: \_\_\_\_\_

API NUMBER

05

### 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

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## Best Management Practices

<u>No</u>	<u>BMP/COA Type</u>	<u>Description</u>
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	ALTERNATIVE PROGRAM: An existing well on the pad (Rio LC 12-242HC 05-001-09950) was 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: 2 comment(s)

### Attachment List

<u>Att Doc Num</u>	<u>Name</u>
403164209	OffsetWellEvaluations Data
403168785	DEVIATED DRILLING PLAN
403168786	DIRECTIONAL DATA
403168788	EXCEPTION LOC REQUEST
403168789	EXCEPTION LOC WAIVERS
403168791	EXCEPTION LOC REQUEST
403168794	WELL LOCATION PLAT

Total Attach: 7 Files

### General Comments

<u>User Group</u>	<u>Comment</u>	<u>Comment Date</u>
		Stamp Upon Approval

Total: 0 comment(s)

## **Public Comments**

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

