

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:

401848034

APPLICATION FOR PERMIT TO:

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

Date Received:

11/21/2018

TYPE OF WELL OIL ☒ GAS ☐ COALBED ☐ OTHER UnplannedRefilling ☐ZONE TYPE SINGLE ZONE ☒ MULTIPLE ZONES ☐ COMMINGLE ZONES ☐Sidetrack ☒Well Name: Wilmoth EWell Number: 5J-232Name of Operator: PDC ENERGY INCCOGCC Operator Number: 69175Address: 1775 SHERMAN STREET - STE 3000City: DENVER State: CO Zip: 80203Contact Name: Ally OtaPhone: (303)860-5800Fax: ()Email: alexandria.ota@pdce.com

RECLAMATION FINANCIAL ASSURANCE

Plugging and Abandonment Bond Surety ID: 20160047

WELL LOCATION INFORMATION

QtrQtr: NWNW Sec: 5 Twp: 4N Rng: 64W Meridian: 6Latitude: 40.345760Longitude: -104.579520
 Footage at Surface: 994 Feet FNL 1100 Feet FWL
Field Name: WATTENBERGField Number: 90750Ground Elevation: 4738County: WELD

GPS Data:

Date of Measurement: 11/03/2016 PDOP Reading: 1.2 Instrument Operator's Name: Brian RottingausIf well is ☐ Directional ☒ Horizontal (highly deviated) **submit deviated drilling plan.**

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

329 FNL 1165 FWL 356 FNL 225 FEL
 Sec: 5 Twp: 4N Rng: 64W Sec: 4 Twp: 4N Rng: 64W

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 ☐ IndianThe Minerals beneath this Oil and Gas Location will be developed by this Well: YesThe right to construct the Oil and Gas Location is granted by: oil and gas lease

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.)

See lease map attached to original APD

Total Acres in Described Lease: 310 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: 1195 Feet

Building Unit: 1196 Feet

High Occupancy Building Unit: 5280 Feet

Designated Outside Activity Area: 5280 Feet

Public Road: 981 Feet

Above Ground Utility: 1019 Feet

Railroad: 5280 Feet

Property Line: 994 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: 132 Feet

Distance from Completed Portion of Wellbore to Nearest Unit Boundary 922 Feet (Enter 5280 for distance greater than 1 mile.)

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

SPACING & FORMATIONS COMMENTS

Spacing Unit: T4N-R64W Section 3: NWNW, Section 4: N2N2, Section 5: N2N2; T5N-R64W Section 32: S2S2; Section 33: S2S2

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		680	GWA

DRILLING PROGRAM

Proposed Total Measured Depth: 16147 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: 81 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 318A

DRILLING WASTE MANAGEMENT PROGRAM

Drilling Fluids Disposal: OFFSITE Drilling Fluids Disposal Methods: Land application

Cuttings Disposal: OFFSITE Cuttings Disposal Method: Beneficial reuse

Other Disposal Description:

Drill Cuttings will be land applied at PDC spread fields with COGCC Facility ID 444255 or 159534.

Beneficial reuse or land application plan submitted? Yes

Reuse Facility ID: 444255 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+1/4	9+5/8	36	0	1635	760	1635	0
1ST	8+1/2	5+1/2	20	0	16417	2035	16417	

☒ 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 Unplanned Sidetrack. While Drilling the curve we encountered a fault which shifted us into crossing the Sharon Springs at a very shallow angle. Once through that the hole became unstable and started to fall in. We tripped above it and increased mud weight and properties. We made multiple attempts to get back through the collapsed hole with no luck.

a. Well name and API - Wilmoth E 5J-232 API 05-123-45487-0000

b. Explanation of situation and why you need to sidetrack – Faulted into the Sharon Springs, Hole collapsed

c. Total measured depth reached (also have TVD) 7270' MD/ 6791' TVD'

d. Casing sizes set and measured depth 9-5/8" @ 1635' MD/ 1635' TVD

e. Description of fish-including top and bottom. None

f. Type of cement you will be using including weight, yield, and sacks. Class G with 3% Cal, 15.8 PPG, 1.15 ft3/sk, 240 sks

g. Measured depth and TVD of sidetrack point 4700' MD/ 4630' TVD

h. Proposed target formation of sidetrack hole if different than permitted. Same as permit.

i. BHL of sidetrack hole. Same as original plan.

j. Wellbore diagram: Attached

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

Location ID: 452251

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 Tech Date: 11/21/2018 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 and applicable orders and is hereby approved.

COGCC Approved:  _____ Director of COGCC Date: 11/21/2018

Expiration Date: 11/20/2020

API NUMBER

05 123 45487 01

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.

<u>COA Type</u>	<u>Description</u>
	Operator has indicated oil-based drilling fluids will not be used.
	1) Comply with Rule 317.j and provide cement coverage from the end of production casing to a minimum of 200' above Niobrara. Verify coverage with cement bond log.
	Operator acknowledges the proximity of the following non-operated 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") for the remediated wells, referencing the API number of the proposed horizontal well(s) stating what appropriate mitigation occurred and that it has been completed, prior to the hydraulic stimulation of these wells. Sitzman 2 (API NO 123-10834) Opdyke/Hinkle 1 (API NO 123-11117) Nikoloric 11-5(API NO 123-11586) Wilmoth PM C 5-3 (API NO 123-14207) Cobb 6-1 (API NO 123-12110) Dinner 6-2 (API NO 123-12524) Wilmoth 6-1 (API NO 123-12537) Wilmoth 6-2 (API NO 123-12538) Wilmoth 6-3 (API NO 123-12676) Ocoma B31-16 (API NO 123-13352) Ocoma UPRR Lease B31-15 (API NO 123-13395) Gemini UPRR B31-14 (API NO 123-13715) Chittenden 2-32 (API NO 123-14406) Eckhardt 2 (API NO 123-10786)
	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") for the remediated wells, referencing the API number of the proposed horizontal well(s) stating what appropriate mitigation occurred and that it has been completed, prior to the hydraulic stimulation of these wells. Millage 12-3 (API NO 123-14510) Smith-Reeves 42-5 (API NO 123-12781) Hinkle 23-5 (API NO 123-12415)
	Bradenhead tests shall be performed and reported according to the following schedule and Form 17 submitted within 10 days of each test: 1) Within 60 days of rig release and prior to stimulation or 2) If a delayed completion, 6 months after rig release and prior to stimulation. 3) Within 30 days after first production, as reported on Form 5A. If a Bradenhead test reports a surface casing pressure greater than 200 psig, stimulation is not allowed until the Engineering Supervisor has been consulted.

Best Management Practices

No	BMP/COA Type	Description
1	Drilling/Completion Operations	Prior to drilling operations, Operator will perform an anti-collision scan of existing offset wells that have the potential of being within close proximity of the proposed well. This anti-collision scan will include definitive MWD or gyro surveys of the offset wells with included error of uncertainty per survey instrument, and compared against the proposed wellpath with its respective error of uncertainty. If current surveys do not exist for the offset wells, Operator may have gyro surveys conducted to verify bottomhole location. The proposed well will only be drilled if the anti-collision scan results indicate that there is not a risk for collision, or harm to people or the environment. For the proposed well, upon conclusion of drilling operations, an as-constructed gyro survey will be submitted to COGCC with the Form 5.
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	One of the first wells drilled on the pad will be logged with Cased hole Pulsed Neutron Log with Gamma Ray Log from 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 in that well and have those logs attached. The Form 5 for each well shall clearly state "No openhole logs were run" and shall reference the Rule 317.p Exception granted for the well.

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
401848034	FORM 2 SUBMITTED
401848062	OffsetWellEvaluations Data
401848080	CORRESPONDENCE
401848161	WELLBORE DIAGRAM
401848449	OFFSET WELL EVALUATION

Total Attach: 5 Files

General Comments

User Group	Comment	Comment Date
Permit	LGD and public comment waived for this application for an unplanned sidetrack with drilling in progress.	11/21/2018
Permit	Initial permitting review complete and task passed.	11/21/2018
Permit	Passed Completeness.	11/21/2018

Total: 3 comment(s)