FORM 2 Rev 08/13

# 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: 401051266 **(SUBMITTED)**

Date Received:

## APPLICATION FOR PERMIT TO:

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

TYPE OF WELL OIL ☒ GAS ☐ COALBED ☐ OTHER ☐ Refiling ☐

ZONE TYPE SINGLE ZONE ☒ MULTIPLE ZONES ☐ COMMINGLE ZONES ☐ Sidetrack ☐

Well Name: Ottenhoff Well Number: 29U-243

Name of Operator: PDC ENERGY INC COGCC Operator Number: 69175

Address: 1775 SHERMAN STREET - STE 3000

City: DENVER State: CO Zip: 80203

Contact Name: Venessa Langmacher Phone: (303)318-6102 Fax: (303)831-3988

Email: venessa.langmacher@pdce.com

## RECLAMATION FINANCIAL ASSURANCE

Plugging and Abandonment Bond Surety ID: 20160047

## WELL LOCATION INFORMATION

QtrQtr: NENE Sec: 29 Twp: 5N Rng: 64W Meridian: 6

Latitude: 40.375956 Longitude: -104.567675

Footage at Surface: 560 feet FNL/FSL FNL 945 feet FEL/FWL FEL

Field Name: WATTENBERG Field Number: 90750

Ground Elevation: 4663 County: WELD

GPS Data:

Date of Measurement: 02/25/2016 PDOP Reading: 2.2 Instrument Operator's Name: Jason Dahlman

If 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 |
|---|---|---|---|---|---|
| 819 | FNL | 473 FEL | 2639 | FSL | 522 FEL |
| Sec: 29 | Twp: 5N | Rng: 64W | Sec: 32 | Twp: 5N | Rng: 64W |

## LOCATION SURFACE & MINERALS & RIGHT TO CONSTRUCT

Surface Ownership: ☒ Fee ☐ State ☐ Federal ☐ Indian

The Surface Owner is: (check all that apply)
- ☐ is the mineral owner beneath the location.
- ☐ 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.)

Township 5 North, Range 64 West, 6th P.M.
Section 29: E/2NE/4

Total Acres in Described Lease: 80 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: | 956 | Feet |
| Building Unit: | 1119 | Feet |
| High Occupancy Building Unit: | 5280 | Feet |
| Designated Outside Activity Area: | 5280 | Feet |
| Public Road: | 932 | Feet |
| Above Ground Utility: | 579 | Feet |
| Railroad: | 3224 | Feet |
| Property Line: | 560 | 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: 69 Feet

Distance from Completed Portion of Wellbore to Nearest Unit Boundary 474 Feet (Enter 5280 for distance greater than 1 mile.)

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

## SPACING & FORMATIONS COMMENTS

Proposed Spacing Unit: T5N-R64W Section 29: E2E2; Section 32: E2NE, NESE

## 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 | | 280 | GWA |

## DRILLING PROGRAM

Proposed Total Measured Depth: 14315 Feet

Distance from proposed wellbore to nearest existing or permitted wellbore belonging to another operator:

140 Feet (Including plugged wells)

SUBMITTED

Will a closed-loop drilling system be used? Yes

Is $H_2S$ 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: Recycle/reuse

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, 159534, 436033, or 434889.

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 | 1600 | 920 | 1600 | 0 |
| 1ST | 8+1/2 | 5+1/2 | 20 | 0 | 14315 | 2035 | 14315 | 0 |

☒ 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

SUBMITTED

## 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

Distance to the completed portion of the nearest well (measured from PDC Roskop 29-1) and the distance to the nearest wellbore belonging to another operator (measured from Noble Cross 32-11A) was measured to via the anti-collision report located within the deviated drilling plan attached, beginning on Page 9.

PDC requests an exception to rule 317.p.: PDC will run a cased hole log

The subject well will have a treated interval less than 150' from the treated interval of the Cross 32-11A (05-123-21153) owned by Noble. Please see the Rule 317.s Stimulation Setback Consent attached.

The subject well will have a treated interval less than 150' from the treated interval of the DIC Amato 42-32, Ottenhoff 41 -29, Ottenhoff 41-6B amd Roskop 29-1. All wells are owned by PDC Energy, Inc. so no stimulation setback consent is needed.

This application is in a Comprehensive Drilling Plan _____ CDP #: _____

Location ID: _____

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: Venessa Langmacher

Title: Senior Regulatory Tech Date: _____ Email: venessa.langmacher@pdce.co

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: _____

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 |
|---|---|
| | |

## 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 open-hole logs were run" and shall reference the Rule 317.p Exception granted for the well. |

Total: 3 comment(s)

## Attachment Check List

| Att Doc Num | Name |
|---|---|
| 401051281 | OffsetWellEvaluations Data |
| 401051288 | DIRECTIONAL DATA |
| 401051289 | PROPOSED SPACING UNIT |
| 401051290 | STIMULATION SETBACK CONSENT |
| 401051291 | WELL LOCATION PLAT |
| 401051294 | DEVIATED DRILLING PLAN |
| 401051297 | SURFACE AGRMT/SURETY |
| 401051299 | OPEN HOLE LOGGING EXCEPTION |
| 401051300 | EXCEPTION LOC REQUEST |
| 401051301 | EXCEPTION LOC WAIVERS |

Total Attach: 10 Files

## General Comments

| User Group | Comment | Comment Date |
|---|---|---|
| | | |

Total: 0 comment(s)