

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:

403397975

(SUBMITTED)

Date Received:

06/22/2023

APPLICATION FOR PERMIT TO

Drill Deepen Re-enter Recomplete and Operate

Amend

TYPE OF WELL OIL GAS COALBED OTHER: _____

Refile

ZONE TYPE SINGLE ZONE MULTIPLE ZONES COMMINGLE ZONES

Sidetrack

Well Name: Edmundson Well Number: 04NA
 Name of Operator: PDC ENERGY INC COGCC Operator Number: 69175
 Address: 1099 18TH STREET SUITE 1500
 City: DENVER State: CO Zip: 80202
 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: SESE Sec: 30 Twp: 1S Rng: 66W Meridian: 6

Footage at Surface: 416 Feet FSL 330 Feet FEL

Latitude: 39.930013 Longitude: -104.810106

GPS Data: GPS Quality Value: 1.4 Type of GPS Quality Value: PDOP Date of Measurement: 03/13/2023

Ground Elevation: 5060

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: 32 Twp: 1S Rng: 66W Footage at TPZ: 847 FNL 150 FWL
Measured Depth of TPZ: 7970 True Vertical Depth of TPZ: 7440 FNL/FSL FEL/FWL

Base of Productive Zone (BPZ)
 Sec: 33 Twp: 1S Rng: 66W Footage at BPZ: 844 FNL 150 FEL
 Measured Depth of BPZ: 18260 True Vertical Depth of BPZ: 7380 FNL/FSL FEL/FWL

Bottom Hole Location (BHL)
 Sec: 33 Twp: 1S Rng: 66W Footage at BHL: 844 FNL 150 FEL
 FNL/FSL FEL/FWL

LOCAL GOVERNMENT PERMITTING INFORMATION

County: ADAMS Municipality: 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: 02/22/2018

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.)

T1S-R66W Section 33: All

Total Acres in Described Lease: 640 Described Mineral Lease is: Fee State Federal Indian

Federal or State Lease # _____

SAFETY SETBACK INFORMATION

Distance from Well to nearest:

Building: 1064 Feet
 Building Unit: 1679 Feet
 Public Road: 887 Feet
 Above Ground Utility: 2178 Feet
 Railroad: 2800 Feet
 Property Line: 330 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 | 407-3469 | 1280 | T1S-R66W Section 32: All Section 33: All |

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: 150 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: 194 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. _____

SPACING & FORMATIONS COMMENTS

DRILLING PROGRAM

Proposed Total Measured Depth: 18260 Feet

TVD at Proposed Total Measured Depth 7380 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: 78 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 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? No

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

Beneficial 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 | 18260 | 2896 | 18260 | 2400 |

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 | 1070 | 1070 | 1270 | 1270 | 1001-10000 | DWR | COGCC UPWQ Study |
| Confining Layer | Pierre Shale | 1270 | 1270 | 1672 | 1672 | | | |
| Groundwater | UPIR/Pawnee Aquifer | 1672 | 1672 | 1825 | 1825 | 1001-10000 | Other | COGCC UPWQ Study |
| Confining Layer | Pierre Shale | 1825 | 1825 | 4567 | 4567 | | | |
| Hydrocarbon | Parkman | 4567 | 4567 | 4752 | 4752 | | | |
| Confining Layer | Pierre Shale | 4752 | 4752 | 4925 | 4925 | | | |
| Hydrocarbon | Sussex | 4925 | 4925 | 5110 | 5110 | | | |
| Confining Layer | Pierre Shale | 5110 | 5110 | 6150 | 6150 | | | |
| Hydrocarbon | Shannon | 6150 | 6150 | 6250 | 6250 | | | |
| Confining Layer | Pierre Shale | 6250 | 6250 | 7575 | 7337 | | | |
| Subsurface Hazard | Sharon Springs Shale | 7575 | 7337 | 7664 | 7377 | | | |
| Hydrocarbon | Niobrara | 7664 | 7377 | 18260 | 7380 | | | |

OPERATOR COMMENTS AND SUBMITTAL

Comments

This Form 2 is being refiled to update footages, spacing, and well name. This location has been built.

The distance to the completed portion of the nearest well on the "Spacing and Formations" tab was measured to the Edmundson 03N (05-001-10113) via 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 plugged and abandoned Cutler 1-D (05-001-06932) via the anti-collision report attached in the deviated drilling plan.

This application is in a Comprehensive Area Plan No CAP #:
 Oil and Gas Development Plan Name OGDID#:
 Location ID: 453934
 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: 6/22/2023 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 |
| 05 001 10117 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.

| <u>COA Type</u> | <u>Description</u> |
|-----------------|--------------------|
| 0 COA | |

Best Management Practices

| <u>No</u> | <u>BMP/COA Type</u> | <u>Description</u> |
|-----------|--------------------------------|---|
| 1 | Drilling/Completion Operations | ALTERNATIVE PROGRAM: An existing well on the pad (Edmundson LE 33-082HC 05-001-10106) 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. |
| 2 | 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. |

Total: 2 comment(s)

Attachment List

| Att Doc Num | Name |
|--------------------|----------------------------|
| 403399592 | OffsetWellEvaluations Data |
| 403399625 | WELL LOCATION PLAT |
| 403399628 | DEVIATED DRILLING PLAN |
| 403399630 | DIRECTIONAL DATA |

Total Attach: 4 Files

General Comments

| User Group | Comment | Comment Date |
|-------------------|----------------|---------------------|
| | | Stamp Upon Approval |

Total: 0 comment(s)

