

FORM
2

Rev
12/20

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:

402974285

Date Received:

03/07/2022

APPLICATION FOR PERMIT TO:

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

Amend ☐

TYPE OF WELL OIL ☒ GAS ☐ COALBED ☐ OTHER: Unplanned Sidetrack

Refill ☐

ZONE TYPE SINGLE ZONE ☒ MULTIPLE ZONES ☐ COMMINGLE ZONES ☐

Sidetrack ☒

Well Name: Volt Well Number: 24NA
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

Surface Location

QtrQtr: SWSW Sec: 5 Twp: 5N Rng: 66W Meridian: 6
Footage at Surface: 1174 Feet FSL 1166 Feet FWL
Latitude: 40.424560 Longitude: -104.804800
GPS Data: GPS Quality Value: 2.5 Type of GPS Quality Value: PDOP Date of Measurement: 08/17/2021
Ground Elevation: 4813
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: 5 Twp: 5N Rng: 66W Footage at TPZ: 128 FSL 2486 FEL
Measured Depth of TPZ: 7623 True Vertical Depth of TPZ: 7063 FNL/FSL FEL/FWL

Base of Productive Zone (BPZ)

Sec: 3 Twp: 5N Rng: 66W Footage at BPZ: 188 FSL 2238 FWL
Measured Depth of BPZ: 17634 True Vertical Depth of BPZ: 7096 FNL/FSL FEL/FWL

Bottom Hole Location (BHL)

Sec: 3 Twp: 5N Rng: 66W Footage at BHL: 188 FSL 2238 FWL
FNL/FSL FEL/FWL

LOCAL GOVERNMENT PERMITTING INFORMATION

County: WELDMunicipality: Greeley

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.? No

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: 01/08/2019

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

Surface Owner Protection Financial Assurance (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.)

5N-66W 5: Lot 2 (N/2NW/4), S/2NW/4, SW/4, SW/4SE/4, and numerous other lands described in leaseTotal Acres in Described Lease: 5681 Described Mineral Lease is: ☒ Fee ☐ State ☐ Federal ☐ Indian

Federal or State Lease # _____

SAFETY SETBACK INFORMATION

Distance from Well to nearest:

Building: 962 FeetBuilding Unit: 1333 FeetPublic Road: 1159 FeetAbove Ground Utility: 469 FeetRailroad: 5280 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.

Property Line: 234 Feet

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 | | 754 | GWA |

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: 139 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

Proposed Spacing Unit: 5N-66W 3: S2SW 4: S2S2 5: S2SE SESW 8: N2NE NENW 9: N2N2 10: N2NW, 754 acres

DRILLING PROGRAM

Proposed Total Measured Depth: 17634 Feet

TVD at Proposed Total Measured Depth 7096 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: 157 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?

Reuse Facility ID: or Document Number:

CASING PROGRAM

| <u>Casing Type</u> | <u>Size of Hole</u> | <u>Size of Casing</u> | <u>Grade</u> | <u>Wt/Ft</u> | <u>Csg/Liner Top</u> | <u>Setting Depth</u> | <u>Sacks Cmt</u> | <u>Cmt Btm</u> | <u>Cmt Top</u> |
|--------------------|---------------------|-----------------------|--------------|--------------|----------------------|----------------------|------------------|----------------|----------------|
| SURF | 12+1/4 | 9+5/8 | J-55 | 36 | 0 | 1834 | 560 | 1834 | 0 |
| 1ST | 8+1/2 | 5+1/2 | P-110 | 20 | 0 | 17634 | 2035 | 17634 | |

☒ Conductor Casing is NOT planned

POTENTIAL FLOW AND CONFINING FORMATIONS

| <u>Zone Type</u> | <u>Formation /Hazard</u> | <u>Top M.D.</u> | <u>Top T.V.D.</u> | <u>Bottom M.D.</u> | <u>Bottom T.V.D.</u> | <u>TDS (mg/L)</u> | <u>Data Source</u> | <u>Comment</u> |
|-------------------|--------------------------|-----------------|-------------------|--------------------|----------------------|-------------------|--------------------|------------------|
| Groundwater | Fox Hills Sandstone | 0 | 0 | 740 | 735 | 1001-10000 | Other | COGCC UPWQ Study |
| Groundwater | UPIR/Pawnee Aquifer | 955 | 945 | 1415 | 1395 | 1001-10000 | Other | COGCC UPWQ Study |
| Confining Layer | Pierre Shale | 1415 | 1395 | 3842 | 3758 | | | |
| Hydrocarbon | Parkman | 3842 | 3758 | 4150 | 4058 | | | |
| Confining Layer | Pierre Shale | 4150 | 4058 | 4332 | 4235 | | | |
| Hydrocarbon | Sussex | 4332 | 4235 | 4627 | 4522 | | | |
| Confining Layer | Pierre Shale | 4627 | 4522 | 4956 | 4841 | | | |
| Hydrocarbon | Shannon | 4956 | 4841 | 5017 | 4900 | | | |
| Confining Layer | Pierre Shale | 5017 | 4900 | 7270 | 6978 | | | |
| Subsurface Hazard | Sharon Springs Shale | 7270 | 6978 | 7010 | 7005 | | | |
| Hydrocarbon | Niobrara | 7355 | 7011 | 17634 | 7096 | | | |

OPERATOR COMMENTS AND SUBMITTAL

Comments

This Form 2 is for an unplanned sidetrack.

- Explanation of situation and why you need to sidetrack: While drilling the lateral we faulted into the Sharon Springs at 15,621'. At the time mud logs did not indicate this and so the well was drilled to TD. While pulling out of the hole the well began to destabilize. We were able to recover all tools, however we feel with this destabilization that it could compromise the casing run and cement job. We would like to perform an open hole sidetrack at 12,885' and redrill the well in the same formation, however we will be avoiding the Sharon Springs at the fault this time.

- Casing sizes set and measured depth: 9-5/8" Casing set at 1,849'

- Description of fish-including top and bottom: No Fish

- Type of cement you will be using including weight, yield, and sacks. No cement needed, open hole sidetrack

- Measured depth and TVD of sidetrack point: 12,885 MD/ 7,024 TVD

- Proposed target formation of sidetrack hole if different than permitted: Same as permit

- BHL of sidetrack hole: Same as permit

- Wellbore Diagram: Attached

Please note the difference in surface casing set depths is due to well being drilled by two different rigs with different KB elevations. Depth on the Casing and Cementing Plan tab matches the surface casing cement ticket submitted with the preliminary Form 5.

This application is in a Comprehensive Area Plan No

CAP #: _____

OGDP ID#: _____ OGDP Name: _____ Expiration Date: _____

Location ID: 466561 Location Name: Volt 19-5 Pad

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

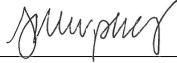
Date: 3/7/2022

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: 3/8/2022

Expiration Date: 03/07/2025

API NUMBER

05 123 50344 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.

Condition of Approval**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 is observed or if there is continuous flow, Operator must contact COGCC engineering for approval prior to stimulation. 2) If a delayed completion, a second test is required between 6-9 months after rig release and must be conducted prior to stimulation. If any pressure greater than 200 psi is observed or if there is continuous flow, Operator must contact COGCC engineering for approval 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) Comply with Rule 408.j. and provide cement coverage from TD to a minimum of 500' above Niobrara. Verify coverage with a cement bond log. 2) In the Form 5A comments, operator will (1) certify that this well has no treated interval within 150' of another operator's well for which a signed Stimulation Setback Consent was not obtained, (2) provide the following information for all other operator's offset wells without consent that have a treated interval within 150' of this as-drilled wellbore: well name and API number, depth of the perforation in this well nearest to the treated interval of the offset well, and the distance between the wells at that depth, and (3) address the well listed below as either (a) obtained consent or (b) treated interval more than 150' away from this as-drilled wellbore. <p>TC MOISER HILL 2-9-11 API 05-123-43748</p> |
| 2 COAs | |

Best Management Practices

| <u>No</u> | <u>BMP/COA Type</u> | <u>Description</u> |
|-----------|--------------------------------|--|
| 1 | Drilling/Completion Operations | Alternative Logging Program: One of the first wells on this pad will be logged with open-hole resistivity log with 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

| <u>Att Doc Num</u> | <u>Name</u> |
|--------------------|------------------|
| 402974285 | FORM 2 SUBMITTED |
| 402974597 | CORRESPONDENCE |
| 402974598 | WELLBORE DIAGRAM |

Total Attach: 3 Files

General Comments

| <u>User Group</u> | <u>Comment</u> | <u>Comment Date</u> |
|-------------------|---|---------------------|
| OGLA | The Oil and Gas Location, its associated Form 2A materials, and the Form 2 Application for Permit to Drill were fully reviewed and approved prior to the commencement of drilling operations for this well. Because this is an application for an unplanned sidetrack with drilling in progress, an Oil and Gas Location Assessment review is not applicable to this ongoing operation. | 03/08/2022 |
| Permit | With Operators concurrence correct city to Greeley, Unit to yes, Distance to unit boundary to 460', Distance to nearest well to 139'. Final Review Completed. | 03/07/2022 |

Total: 2 comment(s)