

FORM
2

Rev
05/22

State of Colorado

Energy & Carbon Management Commission

1120 Lincoln Street, Suite 801, Denver, Colorado 80203
Phone: (303) 894-2100 Fax: (303) 894-2109



Document Number:

403845998

(SUBMITTED)

Date Received:

11/13/2024

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: BOOTH STATE Well Number: 01N

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

Address: 1099 18TH STREET SUITE 1500

City: DENVER State: CO Zip: 80202

Contact Name: Patricia Minerich Phone: (303)228-4000 Fax: ()

Email: RBUARORegulatory@chevron.com

FINANCIAL ASSURANCE FOR PLUGGING, ABANDONMENT, AND RECLAMATION

ECMC Financial Assurance

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

Surety ID Number (if applicable): 20240101

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: SENE Sec: 25 Twp: 5N Rng: 67W Meridian: 6

Footage at Surface: 2588 Feet FNL 752 Feet FEL

Latitude: 40.370682 Longitude: -104.834770

GPS Data: GPS Quality Value: 2.7 Type of GPS Quality Value: PDOP Date of Measurement: 06/16/2021

Ground Elevation: 4985

Field Name: DJ HORIZONTAL CODELL Field Number: 16948

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: 25 Twp: 5N Rng: 67W Footage at TPZ: 223 FNL 150 FEL

Measured Depth of TPZ: 8218 True Vertical Depth of TPZ: 7310 FNL/FSL FEL/FWL

Base of Productive Zone (BPZ)
 Sec: 26 Twp: 5N Rng: 67W Footage at BPZ: 223 FNL 150 FWL
 Measured Depth of BPZ: 18432 True Vertical Depth of BPZ: 7035 FNL/FSL FEL/FWL

Bottom Hole Location (BHL)
 Sec: 26 Twp: 5N Rng: 67W Footage at BHL: 223 FNL 100 FWL
 FNL/FSL FEL/FWL

LOCAL GOVERNMENT PERMITTING INFORMATION

County: WELD 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: 02/01/2024

Comments: 1041WOGLA23-0038 Approved on 2/1/2024. Location has not been built.

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.)

Township 5N, Range 67W, Section 26: NE/4, N/2NW/4

Total Acres in Described Lease: 240 Described Mineral Lease is: Fee State Federal Indian

Federal or State Lease # _____

SAFETY SETBACK INFORMATION

Distance from Well to nearest:

Building: 2112 Feet
Building Unit: 2276 Feet
Public Road: 747 Feet
Above Ground Utility: 736 Feet
Railroad: 5280 Feet
Property Line: 752 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	407-3558	2560	Township 5N, Range 67W, 6th. P.M. Section 25: All Section 26: All Section 35: All Section 36: 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: 445 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

ECMC Approved Spacing Order 407-3558

DRILLING PROGRAM

Proposed Total Measured Depth: 18482 Feet

TVD at Proposed Total Measured Depth 7034 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: 243 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
CONDUCTOR	26	16	A-53B	36.95	0	80	175	80	0
SURF	13+1/2	9+5/8	J-55	36	0	1850	633	1850	0
1ST	8+1/2	5+1/2	P-110	17	0	18482	2166	18482	1000

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
Confining Layer	Pierre Shale	0	0	561	561			
Groundwater	UPIR/Pawnee Aquifer	561	561	1573	1532	1001-10000	Other	COGCC UPWQ Study
Confining Layer	Pierre Shale	1573	1532	4129	3885			
Hydrocarbon	Parkman	4129	3885	4487	4215			
Confining Layer	Pierre Shale	4487	4215	4663	4376			
Hydrocarbon	Sussex	4663	4376	4964	4654			
Confining Layer	Pierre Shale	4964	4654	5271	4937			
Hydrocarbon	Shannon	5271	4937	5792	5416			
Confining Layer	Pierre Shale	5792	5416	7714	7145			
Subsurface Hazard	Sharon Springs Shale	7714	7145	7771	7180			least competent shales
Hydrocarbon	Niobrara	7771	7180	18482	7034			Nio Target

OPERATOR COMMENTS AND SUBMITTAL

Comments

PDC Energy shall isolate both the Fox Hills and UPIR/Pawnee Aquifers with surface casing from hydrocarbon bearing zones and exposure to oil-based drilling fluid. PDC Energy also agrees not to expose the UPIR/Pawnee Aquifers to oil-based mud.

The nearest well in the same formation is located on the same pad, the BOOTH STATE 02N operated by PDC Energy, measured in 2D.

The distance to another wellbore belonging to an outside operator is the BLEHM N #26-03 (API: 05-123-19438) Operated by Noble Energy INC, status SI (243'). The distance was calculated using the anti-collision summary.

There are no wells within 150' besides the wells located on the same pad.

This well has a bottom-hole location beyond the unit boundary setback. The bottom of the completed interval will be within the unit boundary setback at 223' FNL and 150' FWL of Section 26. The wellbore beyond the unit boundary setback will be physically isolated and will not be completed.

Laramie/Fox Hills is not present in this area, this was verified through the DWR Aquifer tool.

This application is in a Comprehensive Area Plan Yes CAP #: 210200012
 Oil and Gas Development Plan Name Cameron 2 OGDID #: 485239
 Location ID: 485813
 I hereby certify all statements made in this form are, to the best of my knowledge, true, correct, and complete.
 Signed: _____ Print Name: Kim Bauer
 Title: Regulatory Analyst II Date: 11/13/2024 Email: denverregulatory@chevron.on

Based on the information provided herein, this Application for Permit-to-Drill complies with ECMC Rules, applicable orders, and SB 19-181 and is hereby approved.

ECMC Approved: _____ Director of ECMC Date: _____
 Expiration Date: _____

API NUMBER
05

CONDITIONS OF APPROVAL, IF ANY LIST

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	Operator will perform anti-collision evaluation of all active (producing, shut-in, or temporarily abandoned) offset wellbores that have the potential of being within 150' of the proposed well prior to drilling operations.

2	Drilling/Completion Operations	During and Post stimulation: Operator will comply with the COGCC Policy for Bradenhead Monitoring During Hydraulic Fracturing Treatments in the Greater Wattenberg Area dated 5/29/12.`
3	Drilling/Completion Operations	If a skid is performed for the subject well, then the only required BOPE tests are for the BOPE connection bonnet seal breaks, as long as a full BOPE test was performed at the beginning of the pad, and as long as all necessary BOPE tests are completed at least every 30 days during the pad operations.`
4	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 "Open-hole logging exception - 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: 4 comment(s)

ATTACHMENT LIST

<u>Att Doc Num</u>	<u>Name</u>
403903246	WELL LOCATION PLAT
403903253	SURFACE AGRMT/SURETY
403903289	DEVIATED DRILLING PLAN
403912325	OPEN HOLE LOGGING EXCEPTION
403919835	OffsetWellEvaluations Data
403985855	DIRECTIONAL DATA

Total Attach: 6 Files

General Comments

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

Total: 0 comment(s)