

FORM 2 Rev 05/22

State of Colorado Energy & Carbon Management Commission

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Document Number: 403847125 Date Received: 11/13/2024

APPLICATION FOR PERMIT TO

Application type options: Drill, Deepen, Re-enter, Recomplete and Operate, Amend, Refile, Sidetrack. Well type options: OIL, GAS, COALBED, OTHER. Zone type options: SINGLE ZONE, MULTIPLE ZONES, COMMINGLE ZONES.

Well Name: BOOTH STATE Well Number: 05N 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: RBUDevPermitting@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: NESE Sec: 25 Twp: 5N Rng: 67W Meridian: 6 Footage at Surface: 2625 Feet FSL 752 Feet FEL Latitude: 40.370517 Longitude: -104.834771 GPS Data: GPS Quality Value: 1.7 Type of GPS Quality Value: PDOP Date of Measurement: 06/16/2021 Ground Elevation: 4983 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: 25 Twp: 5N Rng: 67W Footage at TPZ: 2003 FNL 150 FEL Measured Depth of TPZ: 7835 True Vertical Depth of TPZ: 7298 FNL/FSL FEL/FWL

Base of Productive Zone (BPZ)

Sec: 26 Twp: 5N Rng: 67W Footage at BPZ: 2008 FNL 150 FWL
Measured Depth of BPZ: 18046 True Vertical Depth of BPZ: 7063 FNL/FSL FEL/FWL

Bottom Hole Location (BHL)

Sec: 26 Twp: 5N Rng: 67W Footage at BHL: 2008 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? [X] Yes [] No

[X] 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: [X] Fee [] State [] Federal [] Indian

Mineral Owner beneath this Well's Oil and Gas Location: [X] 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):

- [X] Fee
- [X] 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: 2061 Feet
Building Unit: 2221 Feet
Public Road: 749 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: 18096 Feet

TVD at Proposed Total Measured Depth 7062 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: 10 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

<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>
CONDUCTOR	26	16	A-52A	36.94	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	18096	2113	18096	

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>
Confining Layer	Pierre Shale	0	0	559	559			
Groundwater	UPIR/Pawnee Aquifer	559	559	1550	1531	1001-10000	Other	COGCC UPWQ Study
Confining Layer	Pierre Shale	1550	1531	3970	3887			
Hydrocarbon	Parkman	3970	3887	4303	4212			
Confining Layer	Pierre Shale	4303	4212	4471	4375			
Hydrocarbon	Sussex	4471	4375	4751	4648			
Confining Layer	Pierre Shale	4751	4648	5048	4937			
Hydrocarbon	Shannon	5048	4937	5541	5417			
Confining Layer	Pierre Shale	5541	5417	7318	7111			
Subsurface Hazard	Sharon Springs Shale	7318	7111	7371	7146			least competent shales
Hydrocarbon	Niobrara	7371	7146	18096	7062			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 04C operated by PDC Energy, measured in 2D.

The distance to another wellbore belonging to an outside operator is the BLEHM #2 (API: 05-123-11006) Operated by PATINA OIL & GAS CORPORATION, status PA (10'). The distance was calculated using the anti-collision summary. No 408.u is required, well has been plugged and abandoned.

Wells within 150':

BLEHM N #26-8 05-123-23344 (SI) 120' operated by Noble Energy INC, 408.u consent attached.

BOOTH #N 25-6 05-123-18083 (SI) 140' operated by PDC Energy INC, no 408.u is required.

BOOTH #25-14 05-123-17369 (PA)144' operated by PDC Energy INC, no 408.u is required, well has been plugged and abandoned.

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 2008' 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 OGDP ID#: 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

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 ECMC Rules, applicable orders, and SB 19-181 and is hereby approved.

ECMC Approved:  Director of ECMC Date: 12/17/2024

Expiration Date: 12/08/2032

API NUMBER
05 123 52855 00

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>
Drilling/Completion Operations	The Operator will ensure the wellbore beyond the unit boundary setback is physically isolated and is not completed. In the Operator Comments on the Form 5A the operator will (1) report the footages from the section lines of the bottom of the completed interval (2) describe how the wellbore beyond the unit boundary setback is physically isolated and (3) certify that none of the wellbore beyond the setback was completed.
Drilling/Completion Operations	<p>Operator acknowledges the proximity of the listed wells. Operator agrees to: provide mitigation option 1 or 2 (per the Offset Well Evaluation and Hydraulic Fracturing Operator Guidance Document) 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") stating that appropriate mitigation occurred and that it has been completed, prior to the hydraulic stimulation of this well.</p> <p>PDC ENERGY INC 123-11216 VETTER *1 PDC ENERGY INC 123-13886 STROH *35-2</p> <p>Operator acknowledges the proximity of the listed well. Operator assures that this offset will be remediated per the Offset Well Evaluation and Hydraulic Fracturing Operator Guidance Document Operator using Option 4. Operator will submit a Form 42 ("OFFSET MITIGATION COMPLETED") stating that appropriate mitigation will be completed during the hydraulic stimulation of this well. This Form 42 shall be filed 48 hours prior to stimulation. Operator will monitor casing (surface and production) pressures during the entire stimulation treatment.</p> <p>KERR MCGEE OIL & GAS ONSHORE LP 123-51706 PAUL NELSON *29-11HZ</p>
Drilling/Completion Operations	<p>Per Order 1-232, Bradenhead tests shall be performed according to the following schedule and Form 17 submitted within 10 days of each test:</p> <p>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 ECMC engineering for approval prior to stimulation.</p> <p>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 ECMC engineering for approval prior to stimulation.</p> <p>3) A post-production test within 60 days after first sales, as reported on the Form 10, Certificate of Clearance.</p>
Drilling/Completion Operations	<p>1) Submit Form 42 electronically to ECMC 2 business days prior to MIRU (spud notice) for the first well activity with a rig on the pad and provide 2 business day spud notice via Form 42 for all subsequent wells drilled on the pad.</p> <p>2) 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.</p> <p>3) Oil based drilling fluid can only be used after all groundwater has been isolated.</p>
4 COAs	

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>
403847125	FORM 2 SUBMITTED
403903493	DEVIATED DRILLING PLAN
403903496	WELL LOCATION PLAT
403903499	SURFACE AGRMT/SURETY
403912487	OPEN HOLE LOGGING EXCEPTION
403919847	OffsetWellEvaluations Data
403986178	DIRECTIONAL DATA
403992639	STIMULATION SETBACK CONSENT
404031521	OFFSET WELL EVALUATION

Total Attach: 9 Files

General Comments

<u>User Group</u>	<u>Comment</u>	<u>Comment Date</u>
Permit	Final Review Completed.	12/17/2024
Permit	Open: Emailed the SLB to notify them of this pending application. Close: SLB has no concerns with this application. Permitting review complete	12/02/2024
OGLA	The Commission approved OGDG #485239 on December 20, 2023 for the Oil and Gas Location related to this Form 2. OGLA task passed.	11/19/2024

Total: 3 comment(s)