

FORM
2
Rev
05/22

State of Colorado Energy & Carbon Management Commission

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Phone: (303) 894-2100 Fax: (303) 894-2109



Document Number:

403453754

Date Received:

10/24/2023

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: Prairie Well Number: 10C
 Name of Operator: PDC ENERGY INC ECMC Operator Number: 69175
 Address: 1099 18TH STREET SUITE 1500
 City: DENVER State: CO Zip: 80202
 Contact Name: Doug Dennison Phone: (970)270-2853 Fax: ()
 Email: regulatory@pdce.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): 20230093

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: SWSW Sec: 20 Twp: 1S Rng: 66W Meridian: 6

Footage at Surface: 476 Feet FSL 1167 Feet FWL

Latitude: 39.944639 Longitude: -104.804662

GPS Data: GPS Quality Value: 1.5 Type of GPS Quality Value: PDOP Date of Measurement: 04/28/2023

Ground Elevation: 5048

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: 30 Twp: 1S Rng: 66W Footage at TPZ: 150 FNL 1330 FEL

Measured Depth of TPZ: 8585 True Vertical Depth of TPZ: 7757 FNL/FSL FEL/FWL

Base of Productive Zone (BPZ)

Sec: 6 Twp: 2S Rng: 66W Footage at BPZ: 150 FSL 1194 FEL
Measured Depth of BPZ: 24072 True Vertical Depth of BPZ: 7857 FNL/FSL FEL/FWL

Bottom Hole Location (BHL)

Sec: 20 Twp: 2S Rng: 66W Footage at BHL: 150 FSL 1194 FEL
FNL/FSL FEL/FWL

LOCAL GOVERNMENT PERMITTING INFORMATION

County: ADAMS Municipality: Brighton

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: 01/27/2020

Comments:

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
[] 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 31: NESW

Total Acres in Described Lease: 321 Described Mineral Lease is: [X] Fee [] State [] Federal [] Indian

Federal or State Lease #

SAFETY SETBACK INFORMATION

Distance from Well to nearest:

Building: 1359 Feet
 Building Unit: 1346 Feet
 Public Road: 461 Feet
 Above Ground Utility: 503 Feet
 Railroad: 5196 Feet
 Property Line: 472 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.)
CODELL	CODL	407-3513	1440	T1S-R66W Section 30: E2, E2W2 Section 31: E2, E2W2 T2S-R66W Section 6: E2, E2W2

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

DRILLING PROGRAMProposed Total Measured Depth: 24072 Feet TVD at Proposed Total Measured Depth 7857 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: 237 Feet No well belonging to another operator within 1,500 feetWill a closed-loop drilling system be used? YesIs 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? NoWill salt sections be encountered during drilling? NoWill salt based (>15,000 ppm Cl) drilling fluids be used? NoWill oil based drilling fluids be used? YesBOP Equipment Type: Annular Preventor Double Ram Rotating Head NoneBeneficial 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>
SURF	13+1/2	9+5/8	J-55	36	0	2400	950	2400	0
1ST	8+1/2	5+1/2	P-110	20	0	24072	2900	24072	

 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	950	950	1170	1170	1001-10000	DWR	COGCC UPWQ Study
Confining Layer	Pierre Shale	1560	1560	1705	1705			
Groundwater	UPIR/Pawnee Aquifer	1705	1705	2260	2260	1001-10000	Other	COGCC UPWQ Study
Confining Layer	Pierre Shale	2260	2260	4510	4510			
Hydrocarbon	Parkman	4510	4510	4585	4585			
Confining Layer	Pierre Shale	4585	4585	4863	4863			
Hydrocarbon	Sussex	4863	4863	5134	5134			
Confining Layer	Pierre Shale	5134	5134	5495	5495			
Hydrocarbon	Shannon	5495	5495	5778	5778			
Confining Layer	Pierre Shale	5778	5778	7610	7219			
Subsurface Hazard	Sharon Springs	7610	7219	7651	7256			
Hydrocarbon	Niobrara	7651	7256	8200	7657			
Confining Layer	Fort Hays	8200	7657	8244	7680			
Hydrocarbon	Codell	8244	7680	24072	7857			

OPERATOR COMMENTS AND SUBMITTAL

Comments

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 11N. The distance to the nearest wellbore belonging to another operator on the "Drilling Plan" tab was measured to the plugged and abandoned O H D 1 (05-001-06948). Both distances were measured 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 _____ OGD ID#: _____

Location ID: 450942

I hereby certify all statements made in this form are, to the best of my knowledge, true, correct, and complete.

Signed: _____ Print Name: Doug Dennison

Title: Sr Permitting Coordinator Date: 10/24/2023 Email: dougdenison@chevron.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 ECMC Rules, applicable orders, and SB 19-181 and is hereby approved.

ECMC Approved:  _____ Director of ECMC Date: 5/13/2024

Expiration Date: 05/12/2027

API NUMBER

05 001 10574 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.

COA Type

Description

Drilling/Completion Operations	1) Submit Form 42 electronically to COGCC 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. 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.
Drilling/Completion Operations	Operator acknowledges the proximity of the listed non-operated wells. Operator assures that this offset list will be remediated per the Offset Well Evaluation and Hydraulic Fracturing Operator Guidance Document Operator using Option 3. Operator will submit a Form 42 ("OFFSET MITIGATION COMPLETED") stating what appropriate mitigation occurred and that it has been completed, prior to the hydraulic stimulation of this well. 001-08515 Ritchey #1-19 (Petrodyne Production)

Drilling/Completion Operations	<p>Operator acknowledges the proximity of the listed wells. Operator assures that this offset will be remediated per the Offset Well Evaluation and Hydraulic Fracturing Operator Guidance Document (option 4). Operator will submit a Form 42 (“OTHER – AS SPECIFIED BY PERMIT CONDITION”) 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. Surface and production casing pressures of this offset well list will be actively monitored during stimulation of this well. Operator will assure that the offset well’s bradenhead is open to a tank and actively monitored to ensure no flow or fluid is seen during completion operations. If there is indication of communication between the stimulation treatment and an offset well, treatment will be stopped and ECOM Engineering notified.</p> <p>001-10065 Prairie LE #17-019HC (PDC) 001-10070 Prairie LE #17-018HNX (PDC) 001-10076 Prairie LE #18-031HC (PDC) 001-10078 Prairie LE #17-021HN (PDC)</p>
Drilling/Completion Operations	<p>Operator acknowledges the proximity of the listed non-operated wells. Operator assures that this offset will be remediated per the Offset Well Evaluation and Hydraulic Fracturing Operator Guidance Document per the DJ Basin Horizontal Offset Policy using Option 4. Operator will submit a Form 42 (“OTHER – AS SPECIFIED BY PERMIT CONDITION”) 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. No stimulation will occur within 1500’ of this well bore. A statement shall be included on the Form 5A of the affected wells that documents the excluded and the reduced treatment intervals.</p> <p>001-06948 OHD #1 (Vessels O&G)</p>
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.
Planning	<p>Pursuant to Rule 702.b.(2), the approval of this Application for Permit to Drill constitutes a "change in circumstance" to the approved Financial Assurance Plan. The Operator must file a revised Form 3, Financial Assurance Plan, within 10 days of this approval.</p>
Interim Reclamation	<p>Operator shall comply with Notice to Operators: Interim Reclamation Procedures for Delayed Operations (dated January 5, 2017).</p>
Drilling/Completion Operations	<p>Operator will log two (2) additional wells during the second rig occupation with open-hole resistivity log with gamma-ray log from the kick-off point into the surface casing for the stratigraphically deepest wells on each side of the pad for a total of three wells logged.</p>
8 COAs	

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 (Prairie LE 17-016HC 05-001-10066) 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

<u>Att Doc Num</u>	<u>Name</u>
403453754	FORM 2 SUBMITTED
403560637	DEVIATED DRILLING PLAN
403560640	DIRECTIONAL DATA
403565705	OffsetWellEvaluations Data
403570655	WELL LOCATION PLAT
403787882	OFFSET WELL EVALUATION

Total Attach: 6 Files

General Comments

<u>User Group</u>	<u>Comment</u>	<u>Comment Date</u>
Permit	Final Review Completed.	05/10/2024
OGLA	This Location and its associated Form 2A materials was fully evaluated during the review of this APD in accordance with the current Rules. ECMC Staff took all Relevant Local Government (RLG) input into account while reviewing the location. This APD complies with all Colorado ECMC Rules and Staff does not anticipate any significant potential direct adverse impacts to public health, safety, welfare, the environment, and wildlife resources. OGLA task passed.	05/07/2024
Permit	Per operator's concurrence: Updated contact/submitter information. Adjusted Measured Depth of TPZ and BPZ- rounded up based on Deviated Drilling Plan. Permitting review complete.	11/30/2023

Total: 3 comment(s)