



Base of Productive Zone (BPZ)

Sec: 20 Twp: 5N Rng: 66W Footage at BPZ: 235 FSL 2547 FWL

Measured Depth of BPZ: 18309 True Vertical Depth of BPZ: 7372 FNL/FSL  FEL/FWL

Bottom Hole Location (BHL)

Sec: 20 Twp: 5N Rng: 66W Footage at BHL: 235 FSL 2597 FWL

FNL/FSL  FEL/FWL

**LOCAL GOVERNMENT PERMITTING INFORMATION**

County: WELD Municipality: 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.? 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: 08/17/2023

Comments: 1041WOGLA23-0037 was approved on 8/17/2023

**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 5 North - Range 67 West  
Section 24: SE4

Total Acres in Described Lease: 160 Described Mineral Lease is:  Fee  State  Federal  Indian

Federal or State Lease # \_\_\_\_\_

## SAFETY SETBACK INFORMATION

Distance from Well to nearest:

Building: 2190 Feet  
Building Unit: 2326 Feet  
Public Road: 1698 Feet  
Above Ground Utility: 1998 Feet  
Railroad: 5280 Feet  
Property Line: 231 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	407-3556	2230	Township 5 North, Range 66 West Section 19: All Section 20: W2 Township 5 North, Range 67 West Section 23: All Section 24: 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: 152 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: 302 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: 18359 Feet      TVD at Proposed Total Measured Depth 7372 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: 291 Feet       No well belonging to another operator within 1,500 feet

Will a closed-loop drilling system be used? Yes

Is H<sub>2</sub>S gas reasonably expected to be encountered during drilling operations at concentrations greater than or equal to 100 ppm? No      If yes, attach an H<sub>2</sub>S 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-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	18359	2146	18359	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	550	550			
Groundwater	UPIR/Pawnee Aquifer	550	550	1530	1513	1001-10000	Other	COGCC UPWQ Study
Confining Layer	Pierre Shale	1530	1513	3970	3875			
Hydrocarbon	Parkman	3970	3875	4366	4257			
Confining Layer	Pierre Shale	4366	4257	4597	4481			
Hydrocarbon	Sussex	4597	4481	4852	4728			
Confining Layer	Pierre Shale	4852	4728	5114	4982			
Hydrocarbon	Shannon	5114	4982	5313	5174			
Confining Layer	Pierre Shale	5313	5174	7402	7167			
Subsurface Hazard	Sharon Springs Shale	7402	7167	7451	7204			least competent shales
Hydrocarbon	Niobrara	7451	7204	18359	7372			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 to not expose the UPIR/Pawnee Aquifers to oil-based mud.

Fox Hills is not anticipated to be encountered.

The nearest well in the same formation is located on the same pad, the WINDOM 12N operated by PDC Energy Inc. Measured in 2D.

The distance to another wellbore belonging to an outside operator is the KORI J 19-13 (API: 05-123-22720) Operated by NOBLE ENERGY INC, status PA. The distance was calculated using the anti-collision summary. 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 235' FSL and 2547' FWL of Section 20. The wellbore beyond the unit boundary setback will be physically isolated and will not be completed.

This application is in a Comprehensive Area Plan Yes CAP #: 210200012  
Oil and Gas Development Plan Name Cameron 2 OGDP ID#: 485239  
Location ID: 485814

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: 7/18/2024 Email: kimberlybauer@chevron.com

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.

<b><u>COA Type</u></b>	<b><u>Description</u></b>
0 COA	

### **Best Management Practices**

<b><u>No</u></b>	<b><u>BMP/COA Type</u></b>	<b><u>Description</u></b>
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: PDC Energy 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	Alternative Logging Program: One of the first wells drilled on the pad during the first rig occupation will be logged with open-hole resistivity log with gamma-ray log from the kick-off point into the surface casing for one of the stratigraphically deepest wells on the pad. 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 will state "Alternative Logging Program - No open-hole logs were run" and will clearly identify the type of log and the well (by API#) in which open-hole logs were run.

Total: 4 comment(s)

**ATTACHMENT LIST**

<b>Att Doc Num</b>	<b>Name</b>
403802551	OffsetWellEvaluations Data
403816825	DEVIATED DRILLING PLAN
403816826	WELL LOCATION PLAT
403816827	SURFACE AGRMT/SURETY
403823213	DIRECTIONAL DATA

Total Attach: 5 Files

**General Comments**

<b>User Group</b>	<b>Comment</b>	<b>Comment Date</b>
Engineer	ON HOLD: APD's placed on hold pending information regarding PFZ table inconsistencies, both internal to itself, and when compared to directional data.	07/17/2024

Total: 1 comment(s)