

FORM
2

Rev
05/22

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:

402950140

(SUBMITTED)

Date Received:

06/23/2022

APPLICATION FOR PERMIT TO

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

Amend ☐

TYPE OF WELL OIL ☒ GAS ☐ COALBED ☐ OTHER: _____

Refill ☐

ZONE TYPE SINGLE ZONE ☒ MULTIPLE ZONES ☐ COMMINGLE ZONES ☐

Sidetrack ☐

Well Name: Hen Well Number: 10N
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

FINANCIAL ASSURANCE FOR PLUGGING, ABANDONMENT, AND RECLAMATION

COGCC Financial Assurance

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

Surety ID Number (if applicable): 20160047

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: SWNE Sec: 8 Twp: 4N Rng: 64W Meridian: 6

FNL/FSL

FEL/FWL

Footage at Surface: 2219 Feet FNL 2044 Feet FEL

Latitude: 40.328050 Longitude: -104.572340

GPS Data: GPS Quality Value: 1.5 Type of GPS Quality Value: PDOP Date of Measurement: 10/14/2020

Ground Elevation: 4779

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: 8 Twp: 4N Rng: 64W Footage at TPZ: 2278 FNL 2440 FEL
Measured Depth of TPZ: 7260 True Vertical Depth of TPZ: 6913 FNL/FSL FEL/FWL

Base of Productive Zone (BPZ)Sec: 9 Twp: 4N Rng: 64WFootage at BPZ: 2277 FNL 200 FELMeasured Depth of BPZ: 14785True Vertical Depth of BPZ: 6852 FNL/FSL FEL/FWL**Bottom Hole Location (BHL)**Sec: 9 Twp: 4N Rng: 64WFootage at BHL: 2277 FNL 200 FELFNL/FSL FEL/FWL**LOCAL GOVERNMENT PERMITTING INFORMATION**County: WELDMunicipality: 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: 03/17/2022Comments: 1041WOGLA21-0007 CDP is approved**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 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.)

T4N-R64W Section 8: NE1/4Total Acres in Described Lease: 160Described Mineral Lease is: ☒ Fee ☐ State ☐ Federal ☐ Indian

Federal or State Lease # _____

SAFETY SETBACK INFORMATION

Distance from Well to nearest:

Building: 952 Feet
Building Unit: 1340 Feet
Public Road: 2033 Feet
Above Ground Utility: 1479 Feet
Railroad: 5280 Feet
Property Line: 420 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	407-3328	3770	S.4: S2S2S2, S.5: S2S2SE, S.7: SESESE, S.8: E2, S2S2SW, S.9: All, S.16: All, S.17: All, S.18: E2E2E2, S.20: All, S.21: 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: 200 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: 249 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: 14785 Feet

TVD at Proposed Total Measured Depth 6852 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: 44 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
SURF	13+1/2	9+5/8	J-55	36	0	1600	920	1600	0
1ST	8+1/2	5+1/2	P-110	20	0	14785	2035	14785	2000

☒ 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
Groundwater	Fox Hills Sandstone	490	490	878	878	1001-10000	Other	COGCC UPWQ Study
Confining Layer	Pierre Shale	928	928	975	975			
Groundwater	UPIR/Pawnee Aquifer	975	975	1490	1490	1001-10000	Other	COGCC UPWQ Study
Confining Layer	Pierre Shale	1490	1490	3680	3680			
Hydrocarbon	Parkman	3680	3680	3980	3980			
Confining Layer	Pierre Shale	3980	3980	4095	4095			
Hydrocarbon	Sussex	4095	4095	4498	4498			
Confining Layer	Pierre Shale	4498	4498	4930	4930			
Hydrocarbon	Shannon	4930	4930	5002	5002			
Confining Layer	Pierre Shale	5002	5002	6819	6663			
Subsurface Hazard	Sharon Springs Shale	6819	6663	6846	6684			
Hydrocarbon	Niobrara	6948	6722	14785	6852			

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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.

COA Type

Description

Best Management Practices

No BMP/COA Type

Description

1	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.
2	Drilling/Completion Operations	OPEN HOLE LOGGING EXCEPTION: One of the first wells drilled on the pad will be logged with cased-hole neutron 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 in that well and have those logs attached. The Form 5 for each well shall 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: 2 comment(s)

Attachment List

Att Doc Num

Name

403030967	OPEN HOLE LOGGING EXCEPTION
403065122	OffsetWellEvaluations Data
403065123	STIMULATION SETBACK CONSENT
403086491	DEVIATED DRILLING PLAN
403086492	DIRECTIONAL DATA
403087972	WELL LOCATION PLAT

Total Attach: 6 Files

General Comments

User Group

Comment

Comment Date

		Stamp Upon Approval
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Total: 0 comment(s)

Public Comments

No public comments were received on this application during the comment period.

