

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:

403069376

Date Received:

06/22/2022

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: George Well Number: 16N
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: 21 Twp: 4N Rng: 64W Meridian: 6

Footage at Surface: 1940 Feet FNL 2245 Feet FEL

Latitude: 40.299840 Longitude: -104.554360

GPS Data: GPS Quality Value: 1.5 Type of GPS Quality Value: PDOP Date of Measurement: 05/05/2021

Ground Elevation: 4719

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: 21 Twp: 4N Rng: 64W Footage at TPZ: 1880 FSL 200 FEL
Measured Depth of TPZ: 7920 True Vertical Depth of TPZ: 6753 FNL/FSL FEL/FWL

Base of Productive Zone (BPZ)

Sec: 20 Twp: 4N Rng: 64W Footage at BPZ: 1873 FSL 200 FWL
Measured Depth of BPZ: 18062 True Vertical Depth of BPZ: 6842 FNL/FSL FEL/FWL

Bottom Hole Location (BHL)

Sec: 20 Twp: 4N Rng: 64W Footage at BHL: 1873 FSL 200 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: 03/17/2022

Comments: 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 ☐ 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.)

See attached lease map

Total Acres in Described Lease: 316 Described Mineral Lease is: ☒ Fee ☐ State ☐ Federal ☐ Indian

Federal or State Lease #

SAFETY SETBACK INFORMATION

Distance from Well to nearest:

Building: 2124 Feet
Building Unit: 2250 Feet
Public Road: 1928 Feet
Above Ground Utility: 1947 Feet
Railroad: 5280 Feet
Property Line: 529 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: 200 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: 18062 Feet

TVD at Proposed Total Measured Depth 6842 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: 30 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	18062	2035	18062	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	430	430	800	800	1001-10000	Other	COGCC UPWQ Study
Confining Layer	Pierre Shale	855	855	900	900			
Groundwater	UPIR/Pawnee Aquifer	900	900	1418	1418	1001-10000	Other	COGCC UPWQ Study
Confining Layer	Pierre Shale	1418	1418	3585	3585			
Hydrocarbon	Parkman	3585	3585	3885	3885			
Confining Layer	Pierre Shale	3885	3885	3981	3981			
Hydrocarbon	Sussex	3981	3981	4353	4353			
Confining Layer	Pierre Shale	4353	4353	4800	4800			
Hydrocarbon	Shannon	4800	4800	4875	4875			
Confining Layer	Pierre Shale	4875	4875	7525	6553			
Subsurface Hazard	Sharon Springs Shale	7525	6553	7593	6600			
Hydrocarbon	Niobrara	7593	6600	18062	6842			

OPERATOR COMMENTS AND SUBMITTAL

Comments

The distance to the completed portion of the nearest well on the "Spacing and Formations" tab was measured to the George 17N (Doc #403069382). The distance to the nearest wellbore belonging to another operator on the "Drilling Plan" tab was measured to the plugged and abandoned Balboa C20-2 (05-123-13250). Both distances were measured via the anti-collision report attached in the deviated drilling plan.

The subject well will have a treated interval less than 175' from the treated interval of the below listed wells owned by Noble, as well as the plugged and abandoned Balboa C20-2 (05-123-13250) owned by Gerrity. Stimulation Setback Consent signed by Noble is attached for those closer than 150'. All distances were measured using the attached anti-collision report.

Balboa 20-3 (05-123-13251), 130', P&A
Hanscome C21-79HN (05-123-34334), 104', PR
Highland 12-20 (05-123-22168), 105', SI
Leonard 21-10 (05-123-17588), 106', SI
Leonard 3 (05-123-11824), 107', SI
Stockley C22-79HN (05-123-33415), 87', PR
Thoutt 2 (05-123-11826), 100', SI

This application is in a Comprehensive Area Plan No CAP #: _____
Oil and Gas Development Plan Name Kenosha OGDID #: 481580
Location ID: 482391

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

Signed: _____ Print Name: Ally Ota

Title: Regulatory Analyst Date: 6/22/2022 Email: alexandria.ota@pdce.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 COGCC Rules, applicable orders, and SB 19-181 and is hereby approved.

COGCC Approved:  Director of COGCC Date: 8/5/2022

Expiration Date: 08/04/2025

API NUMBER

05 123 51784 00

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.

Condition of Approval

<u>COA Type</u>	<u>Description</u>
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, must contact COGCC engineer prior to stimulation. 2) If a delayed completion, 6 months after rig release and prior to stimulation. If any pressure greater than 200 psi, must contact COGCC engineer prior to stimulation. 3) A post-production test within 60 days after first sales, as reported on the Form 10, Certificate of Clearance.
Drilling/Completion Operations	<ol style="list-style-type: none"> 1) Submit Form 42 electronically to COGCC 48 hours prior to MIRU (Spud Notice), for the first well/activity on the pad and provide 48 hour spud notice for all subsequent wells drilled on the pad. 2) Comply with Rule 408.j and provide cement coverage from the end of production casing to a minimum of 500' above Niobrara. Verify coverage with cement bond log. 3) Oil-based drilling fluid is to be used only after all aquifers are covered.
Drilling/Completion Operations	<p>Operator acknowledges the proximity of the following non-operated listed wells: Operator agrees to: provide mitigation option 3 (per the DJ Basin Horizontal Offset Policy) 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") for the remediated wells, referencing the API number of the proposed horizontal well(s) stating what appropriate mitigation occurred and that it has been completed, prior to the hydraulic stimulation of this well.</p> <p>Balboa C20-2 (API NO 123-13250)UPRR 36 Pan Am B 1 (API NO 123-07280)</p>
Drilling/Completion Operations	<p>Operator acknowledges the proximity of the following non-operated listed wells: Operator agrees to: provide mitigation option 1 or 2 (per the DJ Basin Horizontal Offset Policy) 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") for the remediated wells, referencing the API number of the proposed horizontal well(s) stating what appropriate mitigation occurred and that it has been completed, prior to the hydraulic stimulation of this well.</p> <p>Klein 21-212 (API NO 123-17862)Clemons 15-1 (API NO 123-12896) Klein 1 (API NO 123-11828)Leonard 3 (API NO 123-11824) Cantrell 22-12 (API NO 123-17361)Leonard 2 (API NO 123-11823) Lehfeltd C27-04 (API NO 123-13616)Thoutt 2 (API NO 123-11823) Travelers 21-814 (API NO 123-18514)Leonard 21-1614 (API NO 123-18509) Leonard 21-10 (API NO 123-17588)Hanscome 28-4 (API NO 123-17502) Todd 20-8 (API NO 123-17624)Victor C 19-16 (API NO 123-13509) Novacek 1 (API NO 123-12347)Johnson R C 29-2 (API NO 123-13187) Balboa 20-1 (API NO 123-13235)Nix 1 (API NO 123-11926) Hanscome C 28-1 (API NO 123-11310)Chenoweth 1 (API NO 123-11827) Balboa C20-4 (API NO 123-15570)</p>
4 COAs	

Best Management Practices

<u>No</u>	<u>BMP/COA Type</u>	<u>Description</u>
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

<u>Att Doc Num</u>	<u>Name</u>
403069376	FORM 2 SUBMITTED
403080560	OffsetWellEvaluations Data
403080562	STIMULATION SETBACK CONSENT
403080737	LEASE MAP
403080739	OPEN HOLE LOGGING EXCEPTION
403080741	WELL LOCATION PLAT
403080743	DEVIATED DRILLING PLAN
403080746	DIRECTIONAL DATA
403128263	OFFSET WELL EVALUATION

Total Attach: 9 Files

General Comments

<u>User Group</u>	<u>Comment</u>	<u>Comment Date</u>
Permit	Emailed the SLB to notify them of this pending application. SLB has no concerns with this application. Final Review Completed.	08/02/2022
Engineer	Offset Wells evaluated with this APD.	07/01/2022
OGLA	The Commission approved OGDG #481580 on 06/08/2022 for the Oil and Gas Location related to this Form 2. OGLA task passed.	06/24/2022

Total: 3 comment(s)