

APPLICATION FOR PERMIT TO:

Drill

 Deepen

 Re-enter

 Recomplete and Operate

Date Received:
08/20/2020

TYPE OF WELL OIL <input checked="" type="checkbox"/> GAS <input type="checkbox"/> COALBED <input type="checkbox"/> OTHER: _____	Refiling <input type="checkbox"/>
ZONE TYPE SINGLE ZONE <input checked="" type="checkbox"/> MULTIPLE ZONES <input type="checkbox"/> COMMINGLE ZONES <input type="checkbox"/>	Sidetrack <input type="checkbox"/>

Well Name: <u>Steamboat</u>	Well Number: <u>1N</u>
Name of Operator: <u>PDC ENERGY INC</u>	COGCC Operator Number: <u>69175</u>
Address: <u>1775 SHERMAN STREET - STE 3000</u>	
City: <u>DENVER</u>	State: <u>CO</u>
	Zip: <u>80203</u>
Contact Name: <u>Ally Ota</u>	Phone: <u>(303)860-5800</u>
	Fax: ()
Email: <u>alexandria.ota@pdce.com</u>	

RECLAMATION FINANCIAL ASSURANCE
 Plugging and Abandonment Bond Surety ID: 20160047

WELL LOCATION INFORMATION

QtrQtr: NWSE Sec: 34 Twp: 4N Rng: 66W Meridian: 6
 Latitude: 40.265750 Longitude: -104.762560

Footage at Surface:	<u>1723</u>	Feet	FNL/FSL	<u>2433</u>	Feet	FEL/FWL
	<u>FSL</u>			<u>FEL</u>		

Field Name: WATTENBERG Field Number: 90750
 Ground Elevation: 4804 County: WELD

GPS Data: GPS Quality Value: 1.3 Type of GPS Quality Value: PDOP Date of Measurement: 04/17/2019
 Instrument Operator's Name: Duncan Hotchkiss

If well is Directional Horizontal (highly deviated) **submit deviated drilling plan.**

Footage at Top of Prod Zone:	FNL/FSL	FEL/FWL	Bottom Hole:	FNL/FSL	FEL/FWL
<u>2300</u>	<u>FSL</u>	<u>2500</u>	<u>2300</u>	<u>FSL</u>	<u>400</u>
		<u>FWL</u>			<u>FWL</u>
Sec: <u>34</u>	Twp: <u>4N</u>	Rng: <u>66W</u>	Sec: <u>33</u>	Twp: <u>4N</u>	Rng: <u>66W</u>

LOCAL GOVERNMENT INFORMATION

County: WELD Municipality: N/A

Per § 34-60-106 (1)(f)(I)(A), the following questions pertain to the "local government with jurisdiction to approve the siting of the proposed oil and gas location."

The local government with jurisdiction is: County

Does the local government with jurisdiction regulate the siting of Oil and Gas Locations, with respect to this location? If the local government does regulate the siting, but has waived its right to precede the COGCC in siting determination, indicate by selecting "YES" here and selecting "Waived" for the disposition below. 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 local government siting permit type is: WOGLA

The local government siting permit was filed on: 06/23/2020

The disposition of the application filed with the local government is: Approved

Additional explanation of local process:

WOGLA20-0033 approved on 8/20/2020

LOCATION SURFACE & MINERALS & RIGHT TO CONSTRUCT

Surface Ownership: Fee State Federal Indian

The Surface Owner is: is the mineral owner beneath the location.

(check all that apply)

is committed to an Oil and Gas Lease.

has signed the Oil and Gas Lease.

is the applicant.

The Mineral Owner beneath this Oil and Gas Location is: Fee State Federal Indian

The Minerals beneath this Oil and Gas Location will be developed by this Well: Yes

The right to construct the Oil and Gas Location is granted by: Surface Use Agreement

Surface damage assurance if no agreement is in place: _____ Surface Surety ID: _____

LEASE INFORMATION

Using standard QtrQtr, Sec, Twp, Rng format, describe one entire mineral lease that will be produced by this well (Describe lease beneath surface location if produced. Attach separate description page or map if necessary.)

4N-66W Section 34: SE

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

Federal or State Lease # _____

Distance from Completed Portion of Wellbore to Nearest Lease Line of described lease: 0 Feet

CULTURAL DISTANCE INFORMATION

Distance to nearest:

Building: 1333 Feet

Building Unit: 1674 Feet

High Occupancy Building Unit: 5280 Feet

Designated Outside Activity Area: 5280 Feet

Public Road: 1719 Feet

Above Ground Utility: 910 Feet

Railroad: 5280 Feet

Property Line: 232 Feet

School Facility: 5280 Feet

School Property Line: 5280 Feet

Child Care Center: 5280 Feet

INSTRUCTIONS:

- All measurements shall be provided from center of the Proposed Well to nearest of each cultural feature as described in Rule 303.a.(5).

- 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, High Occupancy Building Unit, Designated Outside Activity Area, School Facility, and Child Care Center – as defined in 100 Series Rules.

DESIGNATED SETBACK LOCATION INFORMATION

Check all that apply. This location is within a: Buffer Zone
 Exception Zone
 Urban Mitigation Area

- Buffer Zone – as described in Rule 604.a.(2), within 1,000' of a Building Unit
 - Exception Zone - as described in Rule 604.a.(1), within 500' of a Building Unit.
 - Urban Mitigation Area - as defined in 100-Series Rules.

Pre-application Notifications (required if location is within 1,000 feet of a building unit):

Date of Rule 305.a.(1) Urban Mitigation Area Notification to Local Government: _____

Date of Rule 305.a.(2) Buffer Zone Notification to Building Unit Owners: _____

SPACING and UNIT INFORMATION

Distance from completed portion of proposed wellbore to nearest completed portion of offset wellbore permitted or completed in the same formation: 323 Feet

Distance from Completed Portion of Wellbore to Nearest Unit Boundary 1720 Feet (Enter 5280 for distance greater than 1 mile.)

Federal or State Unit Name (if appl): _____ Unit Number: _____

SPACING & FORMATIONS COMMENTS

Spacing Unit consists of: T4N-R66W Section 32: NE, E2NW, E2SE
 Section 33: All
 Section 34: All
 Section 35: All

If this Form 2 is associated with a Drilling and Spacing Unit application, provide docket number: _____

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	407-2393	2240	S.32, 33, 34, 35

DRILLING PROGRAM

Proposed Total Measured Depth: 14901 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: 196 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 Operations Plan)

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

GROUNDWATER BASELINE SAMPLING AND MONITORING AND WATER WELL SAMPLING

Water well sampling required per Rule 318A

DRILLING WASTE MANAGEMENT PROGRAM

Drilling Fluids Disposal: OFFSITE Drilling Fluids Disposal Methods: Recycle/reuse

Cuttings Disposal: OFFSITE Cuttings Disposal Method: Commercial Disposal

Other Disposal Description:

The surface hole will be drilled with water based mud and the production hole will be drilled with oil based mud. Water based drilling fluid and cuttings will be land applied at PDC spread fields with COGCC Facility ID 449950 or 461014.

Beneficial reuse or land application plan submitted? Yes

Reuse Facility ID: 461014 or Document Number: _____

CASING PROGRAM

Casing Type	Size of Hole	Size of Casing	Wt/Ft	Csg/Liner Top	Setting Depth	Sacks Cmt	Cmt Btm	Cmt Top
SURF	12+1/4	9+5/8	36	0	1600	920	1600	0
1ST	8+1/2	5+1/2	20	0	14901	2035	14901	

Conductor Casing is NOT planned

DESIGNATED SETBACK LOCATION EXCEPTIONS

Check all that apply:

- Rule 604.a.(1)A. Exception Zone (within 500' of Building Unit)
- Rule 604.b.(1)A. Exception Location (existing or approved Oil & Gas Location now within a Designated Setback as a result of Rule 604.a.)
- Rule 604.b.(1)B. Exception Location (existing or approved Oil & Gas Location is within a Designated Setback due to Building Unit construction after Location approval)
- Rule 604.b.(2) Exception Location (SUA or site-specific development plan executed on or before August 1, 2013)
- Rule 604.b.(3) Exception Location (Building Units constructed after August 1, 2013 within setback per an SUA or site-specific development plan)

GREATER WATTENBERG AREA LOCATION EXCEPTIONS

Check all that apply:

- Rule 318A.a. Exception Location (GWA Windows).
- Rule 318A.c. Exception Location (GWA Twinning).

RULE 502.b VARIANCE REQUEST

Rule 502.b. Variance Request from COGCC Rule or Spacing Order Number _____

OTHER LOCATION EXCEPTIONS

Check all that apply:

Rule 318.c. Exception Location from Rule or Spacing Order Number _____

Rule 603.a.(2) Exception Location (Property Line Setback).

ALL exceptions and variances require attached Request Letter(s). Refer to applicable rule for additional required attachments (e.g. waivers, certifications, SUAs).

OPERATOR COMMENTS AND SUBMITTAL

Comments PDC requests an exception to rule 317.p.: PDC will run a cased hole log.

The distance to the completed portion of the nearest well on the "Spacing and Formations" tab was measured to the Steamboat 2N (Doc #402458134). The distance to the nearest wellbore belonging to another operator on the "Drilling & Waste Plans" tab was measured to the plugged and abandoned Tanner K Federal 33-12 (05-123-15028). Both distances were measured via the anti-collision report attached in the deviated drilling plan.

This application is in a Comprehensive Drilling Plan No CDP #: _____

Location ID: 471057

Is this application being submitted with an Oil and Gas Location Assessment application? No

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: 8/20/2020 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: 11/5/2020

Expiration Date: 11/04/2022

API NUMBER
05 123 51300 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.

COA Type	Description
Drilling/Completion Operations	<p>Operator acknowledges the proximity of the 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”) stating that appropriate mitigation occurred and that it has been completed, prior to the hydraulic stimulation of this well.</p> <p>123-14845 KERR MCGEE OIL & GAS ONSHORE LP WEBBER *21-4 123-15938 KERR MCGEE OIL & GAS ONSHORE LP HSR-FREELAND *3-2 A 123-15939 KERR MCGEE OIL & GAS ONSHORE LP HSR-FROMHOLZ *4-2A 123-16073 KERR MCGEE OIL & GAS ONSHORE LP HSR-TRAIN *12-35 123-16074 KERR MCGEE OIL & GAS ONSHORE LP HSR-BACANSKAS *13-35 123-16096 KERR MCGEE OIL & GAS ONSHORE LP WILLIAMS *42-34 123-16114 KERR MCGEE OIL & GAS ONSHORE LP WEBBER *31-3 123-16164 KERR MCGEE OIL & GAS ONSHORE LP JOHNSON *32-35 123-16270 KERR MCGEE OIL & GAS ONSHORE LP SANDAU *24-34 123-16360 KERR MCGEE OIL & GAS ONSHORE LP HSR-BIG GEORGE *14-35 123-16600 KERR MCGEE OIL & GAS ONSHORE LP HSR-COLE *6-34 123-16601 KERR MCGEE OIL & GAS ONSHORE LP HSR-BURMESTER *7-34 123-16649 KERR MCGEE OIL & GAS ONSHORE LP HSR-DIEFENBACH *10-34 123-16650 KERR MCGEE OIL & GAS ONSHORE LP HSR-ENGSTROM *15-34 123-17889 KERR MCGEE OIL & GAS ONSHORE LP HSR-FRAHM *9-34 123-23355 KERR MCGEE OIL & GAS ONSHORE LP MILE HIGH *30-2 123-23354 KERR MCGEE OIL & GAS ONSHORE LP MILE HIGH *31-2 123-32348 KERR MCGEE OIL & GAS ONSHORE LP PIERSON *22-34 123-15133 NOBLE ENERGY INC WEBER K *33-9 123-15134 NOBLE ENERGY INC WEBER K *33-10 123-15421 NOBLE ENERGY INC UPRC *33-8F 123-15422 NOBLE ENERGY INC UPRC *33-7F 123-15458 NOBLE ENERGY INC UPRC FEDERAL *33-6F 123-15481 NOBLE ENERGY INC BRUZEWSKI *33-16F 123-15521 NOBLE ENERGY INC SANDAU *34-12F 123-15132 PDC ENERGY INC TANNER K *33-14</p> <p>Operator acknowledges the proximity of the listed non-operated wells. Operator assures that this offset list will be remediated per the DJ Basin Horizontal Offset Policy (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.</p> <p>123-15482 SNYDER OIL CORP BRUZEWSKI *33-15f</p> <p>Operator acknowledges the proximity of the listed wells. Operator assures that this offset list will be remediated per the DJ Basin Horizontal Offset Policy (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 assure that the well’s Bradenhead is open and monitored during the entire stimulation treatment – a person will monitor for any evidence of fluid, a Bradenhead test will be performed prior to the beginning of stimulation.</p> <p>123-22398 KERR MCGEE OIL & GAS ONSHORE LP SHUTT *24-34 123-22605 KERR MCGEE OIL & GAS ONSHORE LP SHUTT *20-34</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, 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	<p>1) Submit Form 42 electronically to COGCC 48 hours prior to MIRU (spud notice) for the first well activity with a rig on the pad and provide 48 hour spud notice via Form 42 for all subsequent wells drilled on the pad.</p> <p>2) Comply with Rule 317.j. and provide cement coverage from TD to a minimum of 500' above Niobrara and from 500' below Shannon to 500' above Sussex. Verify coverage with cement bond log.</p> <p>3) Oil-based drilling fluid is to be used only after all fresh water aquifers are covered.</p>
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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	Operator will comply with COGCC Policy for Bradenhead Monitoring During Hydraulic Fracturing Treatments in the Greater Wattenberg Area dated May 29, 2012. The Colorado Oil and Gas Conservation Commission (COGCC) has established this Policy Regarding Bradenhead Monitoring During Hydraulic Fracturing Treatments ("Treatment") in the Greater Wattenberg Area ("GWA") pursuant to COGCC 207.a. ("Policy"). This Policy applies to oil and gas operations in the GWA as defined by the COGCC Rules of Practice and Procedure.
3	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: 3 comment(s)

Applicable Policies and Notices to Operators

Notice Concerning Operating Requirements for Wildlife Protection.
http://cogcc.state.co.us/documents/reg/Policies/Wildlife_Notice.pdf

Policy for Bradenhead Monitoring During Hydraulic Fracturing Treatments in the Greater Wattenberg Area.
<http://cogcc.state.co.us/documents/reg/Policies/PolicyGwaBradenheadMonitoringFinal.pdf>

Attachment Check List

Att Doc Num	Name
402458123	FORM 2 SUBMITTED
402460414	OffsetWellEvaluations Data
402460437	DEVIATED DRILLING PLAN
402460439	DIRECTIONAL DATA
402460442	EXCEPTION LOC WAIVERS
402460449	WELL LOCATION PLAT
402460450	SURFACE AGRMT/SURETY
402473293	EXCEPTION LOC REQUEST
402473294	OPEN HOLE LOGGING EXCEPTION

402526303

OFFSET WELL EVALUATION

Total Attach: 10 Files

General Comments

<u>User Group</u>	<u>Comment</u>	<u>Comment Date</u>
Permit	Final Review Completed.	11/04/2020
Permit	Permitting review complete.	10/01/2020
OGLA	COGCC conducted the technical review for the related Oil and Gas Location Assessment permit, Form 2A document #402168903 under the statutory authority provided through SB 19-181, including the Objective Criteria. The Director approved the Form 2A on 1/31/2020, establishing Location ID #471057 subject to conditions included in the permit. The well proposed by this related Form 2 was contemplated during COGCC's review of the Form 2A. The Objective Criteria Review Memo (Doc# 1010821) can be found in the document file for this Location.	10/01/2020
Permit	Passed Completeness.	09/09/2020
Permit	SHL on Directional Drilling Plan does not match WLP.	08/28/2020
Permit	Typo in Exception Location Request and Open Hole Logging Exception letters. Return to draft.	08/21/2020

Total: 6 comment(s)