

FORM  
2

Rev  
12/05

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:

400383507

Date Received:

02/27/2013

PluggingBond SuretyID

20030078

APPLICATION FOR PERMIT TO:

1. ☒ Drill, ☐ Deepen, ☐ Re-enter, ☐ Recomplete and Operate

2. TYPE OF WELL

OIL ☒ GAS ☐ COALBED ☐ OTHER \_\_\_\_\_  
SINGLE ZONE ☒ MULTIPLE ☐ COMMINGLE ☐

Refiling ☐

Sidetrack ☐

3. Name of Operator: PDC ENERGY INC

4. COGCC Operator Number: 69175

5. Address: 1775 SHERMAN STREET - STE 3000

City: DENVER State: CO Zip: 80203

6. Contact Name: Liz Lindow Phone: (303)831-3974 Fax: ()

Email: liz.lindow@pdce.com

7. Well Name: Thornton Well Number: 21R-223

8. Unit Name (if appl): \_\_\_\_\_ Unit Number: \_\_\_\_\_

9. Proposed Total Measured Depth: 11868

WELL LOCATION INFORMATION

10. QtrQtr: NWNE Sec: 21 Twp: 7N Rng: 66W Meridian: 6

Latitude: 40.566860 Longitude: -104.779270

Footage at Surface: 350 feet FNL 1600 feet FEL

11. Field Name: Wattenberg Field Number: 90750

12. Ground Elevation: 4970 13. County: WELD

14. GPS Data:

Date of Measurement: 10/11/2012 PDOP Reading: 1.7 Instrument Operator's Name: Tom Carlson

15. 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  
821 FNL 1077 FEL 500 FSL 1080 FEL  
Sec: 21 Twp: 7N Rng: 66W Sec: 21 Twp: 7N Rng: 66W

16. Is location in a high density area? (Rule 603b)? ☐ Yes ☒ No

17. Distance to the nearest building, public road, above ground utility or railroad: 399 ft

18. Distance to nearest property line: 380 ft 19. Distance to nearest well permitted/completed in the same formation(BHL): 880 ft

20. LEASE, SPACING AND POOLING INFORMATION

Objective Formation(s)	Formation Code	Spacing Order Number(s)	Unit Acreage Assigned to Well	Unit Configuration (N/2, SE/4, etc.)
Niobrara	NBRR		320	GWA

21. Mineral Ownership: ☒ Fee ☐ State ☐ Federal ☐ Indian Lease #: \_\_\_\_\_

22. Surface Ownership: ☒ Fee ☐ State ☐ Federal ☐ Indian

23. Is the Surface Owner also the Mineral Owner? ☒ Yes ☐ No Surface Surety ID#: \_\_\_\_\_

23a. If 23 is Yes: Is the Surface Owner(s) signature on the lease? ☒ Yes ☐ No

23b. If 23 is No: ☐ Surface Owners Agreement Attached or ☐ \$25,000 Blanket Surface Bond ☐ \$2,000 Surface Bond ☐ \$5,000 Surface Bond

24. Using standard QtrQtr, Sec, Twp, Rng format enter entire mineral lease description upon which this proposed wellsite is located (attach separate sheet/map if you prefer):

See attached mineral lease map. Horizontal wellbore crosses lease lines within drilling and spacing unit; distance to lease line is 0'; distance to unit boundary is 500'.

25. Distance to Nearest Mineral Lease Line: 0 ft

26. Total Acres in Lease: 452

### DRILLING PLANS AND PROCEDURES

27. Is H2S anticipated? ☐ Yes ☒ No If Yes, attach contingency plan.

28. Will salt sections be encountered during drilling? ☐ Yes ☒ No

29. Will salt (>15,000 ppm TDS CL) or oil based muds be used during drilling? ☐ Yes ☒ No

30. If questions 28 or 29 are yes, is this location in a sensitive area (Rule 901.e)? ☐ Yes ☐ No

31. Mud disposal: ☒ Offsite ☐ Onsite

If 28, 29, or 30 are "Yes" a pit permit may be required.

Method: ☐ Land Farming ☒ Land Spreading ☐ Disposal Facility Other: \_\_\_\_\_

Note: The use of an earthen pit for Recompletion fluids requires a pit permit (Rule 905b). If air/gas drilling, notify local fire officials.

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	875	830	875	0
1ST	8+3/4	7	26	0	7,853	650	7,853	500
1ST LINER	6+1/8	4+1/2	11.6	6647	11,868			

32. BOP Equipment Type: ☐ Annular Preventer ☒ Double Ram ☐ Rotating Head ☐ None

33. Comments 7" casing string will be cemented to at least 200' above Niobrara, around 500' from surface. CBL will only be run in the vertical section of the wellbore. Conductor casing will not be used. Operator requests an exception location per rule 318Aa and rule 318Ac: well will not be drilled in a legal drilling window or twinned with an existing well. Waivers attached. Per rule 318Ae, the Operator requests the proposed spacing unit consisting of 320 acres, E2 of Sec 21 T7N R66W. Proposed spacing unit map and 30-day certificate is attached.

34. Location ID: \_\_\_\_\_

35. Is this application in a Comprehensive Drilling Plan ? ☐ Yes ☒ No

36. Is this application part of submitted Oil and Gas Location Assessment ? ☒ Yes ☐ No

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

Signed: \_\_\_\_\_ Print Name: Liz Lindow

Title: Regulatory Analyst Date: 2/27/2013 Email: liz.lindow@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 and applicable orders and is hereby approved.

COGCC Approved: Matthew Lee Director of COGCC Date: 4/12/2013

#### API NUMBER

05 123 37125 00

Permit Number: \_\_\_\_\_ Expiration Date: 4/11/2015

#### CONDITIONS OF APPROVAL, IF ANY:

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.

Operator must meet Water Well Testing requirements as per amended Rule 318Ae(4)

- 1) Provide notice of MIRU via an electronic Form 42.
- 2) Comply with Rule 317.i and provide cement coverage to a minimum of 200' above the Niobrara. Verify cement coverage with a cement bond log per 317.o.

Operator acknowledges the proximity of the Goodell #1 (API# 123-07417) well. Operator agrees to: provide one of the six mitigation options (per the Interim 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 ("OTHER – AS SPECIFIED BY PERMIT CONDITION") stating what appropriate mitigation occurred and that it has been completed, prior to the hydraulic fracture treatment of this well.

From: Liz Lindow  
Date: Wed, Mar 13, 2013 at 10:39 AM  
Subject: RE: Thornton #21R-223 (doc# 400383507)  
To: "Hollinshead - DNR, Ryan"  
Cc: Sarah Freeman - DNR

PDC approves of the COA.

Thank you!

Liz Lindow | Regulatory Analyst | PDC Energy | O: 303-831-3974 | F: 303-860-5838 | liz.lindow@pdce.com

### **Applicable Policies and Notices to Operators**

Notice Concerning Operating Requirements for Wildlife Protection.

### **Attachment Check List**

Att Doc Num	Name
2166006	MINERAL LEASE MAP
2482246	SURFACE CASING CHECK
400383507	FORM 2 SUBMITTED
400385877	WELL LOCATION PLAT
400385878	DEVIATED DRILLING PLAN
400385879	PROPOSED SPACING UNIT
400385881	30 DAY NOTICE LETTER
400385882	EXCEPTION LOC REQUEST
400385883	EXCEPTION LOC WAIVERS
400385884	DIRECTIONAL DATA

Total Attach: 10 Files

**General Comments**

<b><u>User Group</u></b>	<b><u>Comment</u></b>	<b><u>Comment Date</u></b>
Permit	Final Review Complete.	4/9/2013 9:15:46 AM
Permit	Attached Mineral Lease Map as per OPR.	3/14/2013 8:14:34 AM
Permit	Operator requests approval of a Rule 318Aa and Rule 318Ac exception location: Wellhead is to be located outside of a GWA drilling window and will be located more than 50' from an existing well location. Request and waivers attached.  Needs Mineral Lease Map.	3/12/2013 10:01:20 AM
Engineer	Evaluated offset wells for adequate cement coverage.	3/4/2013 11:52:07 AM
Permit	Passed completeness.	2/28/2013 12:59:48 PM

Total: 5 comment(s)

**BMP**

<b><u>Type</u></b>	<b><u>Comment</u></b>

Total: 0 comment(s)