

FORM
2
Rev
08/13

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:
400852183
(SUBMITTED)

APPLICATION FOR PERMIT TO:

- Drill Deepen Re-enter Recomplete and Operate

Date Received:

TYPE OF WELL OIL GAS COALBED OTHER Unplanned Refilling
ZONE TYPE SINGLE ZONE MULTIPLE ZONES COMMINGLE ZONES Sidetrack

Well Name: Becker Ranch Well Number: 5E-223
Name of Operator: PDC ENERGY INC COGCC Operator Number: 69175
Address: 1775 SHERMAN STREET - STE 3000
City: DENVER State: CO Zip: 80203
Contact Name: Kelsi Welch Phone: (303)860-5800 Fax: ()
Email: Kelsi.Welch@pdce.com

RECLAMATION FINANCIAL ASSURANCE

Plugging and Abandonment Bond Surety ID: 20090078

WELL LOCATION INFORMATION

QtrQtr: NWNW Sec: 5 Twp: 3N Rng: 64W Meridian: 6
Latitude: 40.261170 Longitude: -104.581080
Footage at Surface: 223 feet FNL/FSL FNL 883 feet FEL/FWL FWL
Field Name: WATTENBERG Field Number: 90750
Ground Elevation: 4820 County: WELD
GPS Data:
Date of Measurement: 07/17/2013 PDOP Reading: 1.3 Instrument Operator's Name: Adam Kelly
If well is Directional Horizontal (highly deviated) **submit deviated drilling plan.**
Footage at Top of Prod Zone: FNL/FSL FNL 460 feet FEL/FWL FSL 455 feet FWL
Bottom Hole: FNL/FSL FSL 500 feet FEL/FWL FWL
Sec: 5 Twp: 3N Rng: 64W Sec: 5 Twp: 3N Rng: 64W

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: oil and gas lease
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.)

T3N, R64W Section 5: Lot 2 (80.5 ac) ada NWNW, NENW and S2NW

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: 738 Feet
Building Unit: 738 Feet
High Occupancy Building Unit: 5280 Feet
Designated Outside Activity Area: 5280 Feet
Public Road: 208 Feet
Above Ground Utility: 262 Feet
Railroad: 5280 Feet
Property Line: 223 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, and Designated Outside Activity Area - 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: 12/11/2013

SPACING and UNIT INFORMATION

Distance from Completed Portion of Wellbore to Nearest Wellbore Permitted or Completed in the same formation: 195 Feet

Distance from Completed Portion of Wellbore to Nearest Unit Boundary 500 Feet (Enter 5280 for distance greater than 1 mile.)

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

SPACING & FORMATIONS COMMENTS

W2W2 of Sec. 5 and E2E2 of Sec. 6 T3N R64W

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		320	GWA

DRILLING PROGRAM

Proposed Total Measured Depth: 11419 Feet

Distance to nearest permitted or existing wellbore penetrating objective formation: 195 Feet (Including plugged wells)

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? No
 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: Land application
 Cuttings Disposal: OFFSITE Cuttings Disposal Method: Beneficial reuse
 Other Disposal Description:

Drill cuttings will be land applied at PDC spread fields with COGCC Facility ID 429629, 430649, 431183, 434889, or 436033.

Beneficial reuse or land application plan submitted? Yes
 Reuse Facility ID: 429629 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	13+3/4	9+5/8	36	0	913	830	913	0
1ST	8+3/4	7	26	0	7223	650	7223	500
1ST LINER	6+1/8	4+1/2	13.5	6112	11327			

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 Distance to nearest well, Becker 5-14 measured to via the Anti-Collision Report in the Deviated Drilling plan. Please see attached description of unplanned sidetrack with all appropriate details and COGCC correspondence.

During the drilling of the Becker Ranch 5E-223, API# 05-123-39073, the mud motor twisted off, resulting in a fish in the lateral. PDC must sidetrack to avoid the fish and TD the well.

a. Description of the situation that has resulted in an UNPLANNED sidetrack – Mud Motor twisted off resulting in fish in the lateral. Sidetracking to avoid fish and TD well.

b. Total measured depth reached in the wellbore being plugged back - 8344' MD, 6820' TVD

c. Casing set – size(s) and measured depth(s) - 9-5/8" @ 913' MD/ 911' TVD, 7" @ 7223' MD/ 6850' TVD

d. Description of fish in the hole (if any) – Directional mud motor and drill bit from 8278' MD to 8305' MD

e. Description of proposed plugs: setting measured depths, heights, and cement volumes - No proposed plugs

f. Type of cement to be used for all plugs, including slurry weight (ppg) and yield (cf/sk) - No cement open hole sidetrack.

g. Measured depth of proposed sidetrack kick-off point - 7800' MD 6841' TVD

h. Proposed objective formation(s) for sidetrack hole – Same as permitted

i. BHL Target for sidetrack hole – new or same as the wellbore being abandoned (NOTE: a change in the BHL must be reviewed and approved by COGCC Permitting prior to completing the sidetrack. Drilling a sidetrack to an unapproved BHL could result in an NOAV, plugging the well, or both). - Same as original permit.

j. Verbal/email approval to plug back and sidetrack – indicate the name of the COGCC Engineer who granted verbal/email approval, as described in Step 1.b., and the date approval granted. - Mark Schlagenhauf, 6/11/15. See correspondence attached.

This application is in a Comprehensive Drilling Plan _____ CDP #: _____

Location ID: _____

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: Kelsi Welch _____

Title: Regulatory Analyst Date: _____ Email: Kelsi.Welch@pdce.com

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: _____ Director of COGCC Date: _____

Expiration Date: _____

API NUMBER

05 123 39073 01

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.

Best Management Practices

No BMP/COA Type

Description

<u>No BMP/COA Type</u>	<u>Description</u>
1 Planning	604c.(2).E. Multiwell Pads: This 2A application is for a 4-well pad. No suitable existing locations are in the area.

2	Planning	604c.(2).I. BOPE Testing for Drilling Operations: PDC's contractors will supply a double ram-5000' PSI rated BOPE (Blinds and pipes) and always function test BOPE's prior to placement on the well head and inspect and replace all seals and ram block rubbers. After installation of the BOPE, PDCE conducts a pressure test on the BOPE at a low pressure of (200-400 psi) and a high pressure test to the maximum amount of the BOPE rating with a third party tester, all tests are digitally recorded.
3	Planning	604c.(2).J. BOPE for Well Servicing Operations: All valves will also be tested to maximum rating by a third party prior to being delivered to location. Whenever snubbing operations are being used the snubbing stack will be pressure tested at the same time the BOPE is being tested which consist of a single pipe ram and a annular bag.
4	Planning	604c.(2).L. Drill Stem Tests: PDC does not conduct drill stem tests, but will seek prior approval from the director if a drill stem test will be preformed.
5	Planning	604c.(2).U. Identification of Plugged and Abandoned Wells: Pursuant to rule 319.a.(5)., once the well has been plugged and abandoned, PDC will identify the location of the wellbore with a permanent monument that will detail the well name and date of plugging.
6	Planning	604c.(2).V. Development From Existing Well Pads: An existing pad was not available to utilize to develop these wells.
7	Traffic control	604c.(2).D. Traffic Plan: If required by the local government, a traffic plan will be coordinated with the local jurisdiction prior to commencement of operations.
8	General Housekeeping	604c.(2).N. Control of Fire Hazards: PDC will ensure that any material that might be deemed a fire hazard will be will remain no less than twenty-five (25) feet from the wellhead(s), tanks and separator(s). PDC installs automation equipment for tank level and pressure monitoring inside the bermed area that complies with API RP 500 classifications and with the current national electrical code as adopted by the State of Colorado.
9	General Housekeeping	604c.(2).T. Well Site Cleared: The wellsite will be cleared of all non-essential equipment within ninety (90) days after all wells associated with the pad have been plugged and abandoned.
10	General Housekeeping	604c.(2).P. Removal of Surface Trash: A commercial size trash bin for removing debris will be located on site. This bin will be for use by all parties affiliated with the operation.
11	Material Handling and Spill Prevention	604c.(2).F. Leak Detection Plan: Attached.
12	Material Handling and Spill Prevention	604c.(2).K. Pit Level Indicators: PDC uses an Electronic Drilling Recorder (EDR) with pit level monitor(s) and alarm(s) for production rigs. Basic level gages are used on steel pits utilized for the surface rig.
13	Construction	604c.(2).G. Berm Construction: A geosynthetic liner will be laid under the tanks on this location and a metal containment has been constructed. Operator must implement site-specific best management practices in accordance with good engineering practices, including, but not limited to, construction of a berm or diversion dike, site grading, or other comparable measures, sufficient to protect the down gradient water sources located 321 feet south-west and 444 feet north-west from the nearest well head.
14	Construction	604c.(2).M. Fencing Requirements: The completed wellsites will be surrounded with a fence and gate. PDC personnel will monitor the wellsites regularly upon completion of the wells. Authorized representatives and/or PDC personnel shall be on-site during drilling and completion operations.
15	Construction	604c.(2).Q. Guy Line Anchors: Rig guy wires are anchored to the rig's base beam that the rig stands on, temporary and permanent anchors will not be set on this location.
16	Construction	604c.(2).R. Tank Specifications: Condensate storage tanks will be designed, constructed and maintained in accordance with National Fire Protection Association (NFPA) Code 30 (2008 version). PDC will maintain written records to verify proper design, construction and maintenance. All records will be available for inspection by the Director.
17	Construction	604c.(2).S. Access Roads: PDC will utilize the lease access road from WCR 53 for drilling operations and maintenance equipment. The road will be properly constructed and maintained to accommodate for local emergency vehicle access.

18	Noise mitigation	604c.(2).A. Noise: PDC has conducted baseline noise surveys for all drilling rigs that are being contracted and has also conducted a baseline noise survey for hydraulic fracture stimulation operations on a representative horizontal well. These baseline surveys are utilized for site specific noise modeling to determine if any mitigation measures are warranted. A review will be conducted to identify potential receptors within 1000 feet of the proposed Becker Ranch 5J-HZ pad site. The building units of concern are located north-east of the proposed pad at a distance of approximately 758 feet, 776 feet and 908 feet respectively. Noise modeling will be conducted for the proposed pad. If results exceed the Light Industrial Zone standard of 65 decibels (db) at the receptor location, additional methods of noise mitigation shall include but not be limited to hay bales, noise walls, or customized semi-trailers.
19	Emissions mitigation	604c.(2).C. Green Completions: Flowlines, 48" HLPs, sand traps all capable of supporting green completions as described in rule 805 shall be installed at any Oil and Gas location at which commercial quantities of gas and or oil are reasonable expected to be produced based on existing wells. All green flow back equipment will be able to handle more than 1.5 times the amount of any know volumes in the surrounding field. First sign of salable gas will be put into production equipment and turned down line.
20	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.
21	Drilling/Completion Operations	604c.(2).O. Loadlines: All loadlines shall be bullplugged or capped.
22	Drilling/Completion Operations	Open hole resistivity log with gamma ray will be run on one of the wells on this pad to describe the stratigraphy of the vertical section of the wellbore and to adequately verify the setting depth of the surface casing and aquifer coverage. The Drilling Completion Report - Form 5 for every well on the pad shall identify which well was logged.

Total: 22 comment(s)

Attachment Check List

<u>Att Doc Num</u>	<u>Name</u>
400852220	OffsetWellEvaluations Data
400852273	WELLBORE DIAGRAM
400852275	DEVIATED DRILLING PLAN
400852281	DIRECTIONAL DATA
400852286	CORRESPONDENCE

Total Attach: 5 Files

General Comments

<u>User Group</u>	<u>Comment</u>	<u>Comment Date</u>

Total: 0 comment(s)