

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:

400521586

### APPLICATION FOR PERMIT TO:

Drill       Deepen       Re-enter       Recomplete and Operate

Date Received:

01/29/2014

TYPE OF WELL    OIL     GAS     COALBED     OTHER \_\_\_\_\_

Refiling

ZONE TYPE    SINGLE ZONE     MULTIPLE ZONES     COMMINGLE ZONES

Sidetrack

Well Name: Becker Ranch      Well Number: 5M-303  
Name of Operator: PDC ENERGY INC      COGCC Operator Number: 69175  
Address: 1775 SHERMAN STREET - STE 3000  
City: DENVER      State: CO      Zip: 80203  
Contact Name: Julie Webb      Phone: (303)831-3933      Fax: ( )  
Email: julie.webb@pdce.com

### RECLAMATION FINANCIAL ASSURANCE

Plugging and Abandonment Bond Surety ID: 20090078

### WELL LOCATION INFORMATION

QtrQtr: NENW      Sec: 5      Twp: 3N      Rng: 64W      Meridian: 6

Latitude: 40.260900      Longitude: -104.576400

Footage at Surface:      317 feet      FNL/FSL      FNL      2189 feet      FEL/FWL      FWL

Field Name: WATTENBERG      Field Number: 90750

Ground Elevation: 4816      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      FEL/FWL      Bottom Hole:      FNL/FSL      FEL/FWL  
835      FNL      2440      FWL      500      FSL      2435      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: 576 Feet

Building Unit: 576 Feet

High Occupancy Building Unit: 5280 Feet

Designated Outside Activity Area: 5280 Feet

Public Road: 313 Feet

Above Ground Utility: 640 Feet

Railroad: 5280 Feet

Property Line: 317 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: 12/11/2013

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: 181 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**

Unit Configuration: E2W2, W2E2 Sec 5, T3N, T64W

**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: 11462 Feet

Distance to nearest permitted or existing wellbore penetrating objective formation: 181 Feet (Including plugged wells)

Will a closed-loop drilling system be used? Yes

Is H<sub>2</sub>S gas reasonably expected to be encountered during drilling operations at concentrations greater than or equal to 100 ppm? No (If Yes, attach an H<sub>2</sub>S 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: Recycle/reuse

Cuttings Disposal: OFFSITE Cuttings Disposal Method: Beneficial reuse

Other Disposal Description:

see comments

Beneficial reuse or land application plan submitted? Yes

Reuse Facility ID: \_\_\_\_\_ 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             | 875           | 830       | 875     | 0       |
| 1ST         | 8+3/4        | 7              | 26    | 0             | 7480          | 650       | 7480    | 500     |
| 1ST LINER   | 6+1/8        | 4+1/2          | 11.6  | 6258          | 11462         |           |         |         |

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 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. Drill cuttings will be land applied at PDC spread fields with COGCC Facility ID 425112, 429629, 430649, 431183, or 434889. Distance to nearest well measured to the Becker 15-9I via the Anti-Collision Report in the Deviated Drilling plan.

This application is in a Comprehensive Drilling Plan \_\_\_\_\_ CDP #: \_\_\_\_\_

Location ID: \_\_\_\_\_

Is this application being submitted with an Oil and Gas Location Assessment application? Yes

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

Signed: \_\_\_\_\_ Print Name: Julie Webb

Title: Regulatory Analyst Date: 1/29/2014 Email: julie.webb@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: 3/10/2014

Expiration Date: 03/09/2016

**API NUMBER**  
05 123 39071 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.

| <u>COA Type</u> | <u>Description</u>   |
|-----------------|--|
|                 | Operator acknowledges the proximity of The Becker 5-1 (API NO 123-12297), the Becker 5-2 ( API NO 123-13742), the Becker 5-6 ( API NO 123-13763), the Becker 5-7 ( API NO 123-13764), the Becker 5-3 ( API NO 123-17299), the Becker 5-11 ( API NO 123-17300), the Becker 5-12 ( API NO 123-17301), the Becker 5-13 (API NO 123-17302), the Becker 5-14 (API NO 123-18180), and the Becker 5-15 (API NO 123-18182). 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 ("OTHER – AS SPECIFIED BY PERMIT CONDITION") stating what appropriate mitigation occurred and that it has been completed, prior to the hydraulic stimulation of this well. |
|                 | Operator acknowledges the proximity of the non-operated wells: The Ruby Red D 8-2 ( API NO 123-16885), the Howell 1 ( API NO 123-07827), the McGuirk-Howell C 32-14 (API NO 123-15882), and the Pluss 32-43 (API NO 123-15974). Operator assures that these offsets will be remediated per the DJ Basin Horizontal Offset Policy (options 1 or 2) or operator will address this well with mitigation option 4. Operator will 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 stimulation of this well.   |
|                 | <p>1) Submit Form 42 electronically to COGCC 48 hours prior to MIRU.</p> <p>2) Comply with Rule 317.i and provide cement coverage from the bottom of the production casing to a minimum of 200' above Niobrara and from 200' below the Sussex to 200' above Sussex . Verify coverage with cement bond log.</p> <p>3) Run and submit Directional Survey from TD to base of surface casing. The operator shall comply with Rule 321, and it shall be the operator's responsibility to ensure that the wellbore complies with setback requirements in commission orders or rules prior to producing the well.</p>   |

## Best Management Practices

| <u>No</u> | <u>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).V. Development From Existing Well Pads: An existing pad was not available to utilize to develop these wells.   |
| 3         | 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. |
| 4         | 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.  |
| 5         | 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.   |
| 6         | 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.  |

|    |  |   |
|----|--|---|
| 7  | Planning                               | 604.c.(2).W. Site Specific Measures: Dust abatement will be applied and properly maintained on CR 53 to minimize dust. Lights should be turned downward and away from receptors. The building units of concern are located north-west of the proposed pad at a distance of approximately 515 feet and 942 feet.   |
| 8  | 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.  |
| 9  | 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.   |
| 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 | 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.   |
| 12 | Material Handling and Spill Prevention | 604c.(2).F. Leak Detection Plan: See attached.  |
| 13 | 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.   |
| 14 | 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.   |
| 15 | 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.  |
| 16 | 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.   |
| 17 | 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 natural earthen berm exists between the building units and the production facility. PDC will make use of the natural terrain to provide additional noise abatement. A review will be conducted to identify potential receptors within 1000 feet of the proposed Becker Ranch 5M-HZ pad site. The building units of concern are located north-west of the proposed pad at a distance of approximately 515 feet and 942 feet. 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. |
| 18 | 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.   |
| 19 | 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.  |
| 20 | Drilling/Completion Operations         | 604c.(2).O. Loadlines: All loadlines shall be bullplugged or capped.  |

Total: 20 comment(s)

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

Notice Concerning Operating Requirements for Wildlife Protection.

Policy for Bradenhead Monitoring During Hydraulic Fracturing Treatments in the Greater Wattenberg Area.

### **Attachment Check List**

| <b><u>Att Doc Num</u></b> | <b><u>Name</u></b>          |
|---------------------------|-----------------------------|
| 2157552                   | OPEN HOLE LOGGING EXCEPTION |
| 400521586                 | FORM 2 SUBMITTED            |
| 400524817                 | DEVIATED DRILLING PLAN      |
| 400524818                 | DIRECTIONAL DATA            |
| 400525293                 | 30 DAY NOTICE LETTER        |
| 400532590                 | PROPOSED SPACING UNIT       |
| 400536426                 | OffsetWellEvaluations Data  |
| 400540773                 | EXCEPTION LOC REQUEST       |
| 400540774                 | EXCEPTION LOC WAIVERS       |
| 400547527                 | WELL LOCATION PLAT          |

Total Attach: 10 Files

### **General Comments**

| <b><u>User Group</u></b> | <b><u>Comment</u></b>   | <b><u>Comment Date</u></b> |
|--------------------------|---|----------------------------|
| Permit                   | Oper. submitted open hole logging exception request.<br>No LGD or public comments.<br>Final Review--passed. | 3/7/2014 7:42:56<br>AM     |
| Permit                   | Passed completeness.  | 1/29/2014<br>3:43:09 PM    |
| Permit                   | Returned to draft:<br>Wrong Well Location Plat.   | 1/29/2014<br>3:23:12 PM    |

Total: 3 comment(s)