


<b>FORM</b> <b>2</b> Rev 08/13	<b>State of Colorado</b> <b>Oil and Gas Conservation Commission</b> 1120 Lincoln Street, Suite 801, Denver, Colorado 80203 Phone: (303) 894-2100 Fax: (303) 894-2109		Document Number: 400975682 <b>(RE-SUBMITTED)</b>  Date Received:
<b>APPLICATION FOR PERMIT TO:</b>			
<input checked="" type="checkbox"/> <b>Drill</b> <input type="checkbox"/> Deepen <input type="checkbox"/> Re-enter <input type="checkbox"/> Recomplete and Operate			
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>Hop</u>		Well Number: <u>18F-102</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>Venessa Langmacher</u>		Phone: <u>(303)318-6102</u>	Fax: <u>(303)831-3988</u>
Email: <u>venessa.langmacher@pdce.com</u>			
<b>RECLAMATION FINANCIAL ASSURANCE</b>			
Plugging and Abandonment Bond Surety ID: <u>20090078</u>			
<b>WELL LOCATION INFORMATION</b>			
QtrQtr: <u>NWNW</u>	Sec: <u>18</u>	Twp: <u>5N</u>	Rng: <u>64W</u>
Meridian: <u>6</u>		Latitude: <u>40.403617</u>	
Longitude: <u>-104.598612</u>		Footage at Surface: <u>1001</u> feet	
FNL/FSL <u>FNL</u>	<u>893</u>	FEL/FWL <u>FWL</u>	<u>feet</u>
Field Name: <u>WATTENBERG</u>		Field Number: <u>90750</u>	
Ground Elevation: <u>4628</u>		County: <u>WELD</u>	
GPS Data:			
Date of Measurement: <u>09/30/2015</u>		PDOP Reading: <u>2.2</u>	Instrument Operator's Name: <u>Jason Dahlman</u>
If well is <input type="checkbox"/> Directional <input checked="" type="checkbox"/> Horizontal (highly deviated) <b>submit deviated drilling plan.</b>			
Footage at Top of Prod Zone:		Bottom Hole:	
FNL/FSL <u>1199</u>	FNL <u>819</u>	FEL/FWL <u>1265</u>	FNL <u>500</u>
FNL <u>1199</u>	FWL <u>819</u>	FEL <u>1265</u>	FEL <u>500</u>
Sec: <u>18</u> Twp: <u>5N</u> Rng: <u>64W</u>		Sec: <u>17</u> Twp: <u>5N</u> Rng: <u>64W</u>	
<b>LOCATION SURFACE &amp; MINERALS &amp; RIGHT TO CONSTRUCT</b>			
Surface Ownership: <input checked="" type="checkbox"/> Fee <input type="checkbox"/> State <input type="checkbox"/> Federal <input type="checkbox"/> Indian			
The Surface Owner is:			
<input checked="" type="checkbox"/> is the mineral owner beneath the location.			
<input checked="" type="checkbox"/> is committed to an Oil and Gas Lease.			
<input checked="" type="checkbox"/> has signed the Oil and Gas Lease.			
<input type="checkbox"/> is the applicant.			
The Mineral Owner beneath this Oil and Gas Location is: <input checked="" type="checkbox"/> Fee <input type="checkbox"/> State <input type="checkbox"/> Federal <input type="checkbox"/> Indian			
The Minerals beneath this Oil and Gas Location will be developed by this Well: <u>Yes</u>			
The right to construct the Oil and Gas Location is granted by: <u>oil and gas lease</u>			
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.)

T5N-R64W SECTION 18: W2NW4

Total Acres in Described Lease: 80 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: 424 Feet  
Building Unit: 631 Feet  
High Occupancy Building Unit: 5280 Feet  
Designated Outside Activity Area: 5280 Feet  
Public Road: 988 Feet  
Above Ground Utility: 274 Feet  
Railroad: 5280 Feet  
Property Line: 278 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: 12/09/2015

## 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: 50 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

Proposed Spacing Unit: T5N-R64W Section 18: N2, Section 17: N2

## 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		640	GWA

## DRILLING PROGRAM

Proposed Total Measured Depth: 16234 Feet

Distance from proposed wellbore to nearest existing or permitted wellbore belonging to another operator:

83 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: [X] Annular Preventor [X] 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 444255, 159534, 436033, or 434889.

Beneficial reuse or land application plan submitted? Yes

Reuse Facility ID: 444255 or Document Number:

CASING PROGRAM

Table with 9 columns: Casing Type, Size of Hole, Size of Casing, Wt/Ft, Csg/Liner Top, Setting Depth, Sacks Cmt, Cmt Btm, Cmt Top. Rows include SURF, 1ST, and 1ST LINER.

[X] 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:

- [X] Rule 318A.a. Exception Location (GWA Windows).
[X] 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 subject well will have a treated interval less than 150' from the treated interval of the Puype B 18-17 owned by Noble. Please see the Rule 317.s Stimulation Setback Consent attached.

The subject well will have a treated interval less than 150' from the treated interval of the Bright/Dunn 18D. All wells are owned by PDC Energy, Inc. so no stimulation setback consent is needed.

Distance to the completed portion of the nearest well was measured to via the anti-collision report located within the deviated drilling plan attached.

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

Location ID: 331309

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: Venessa Langmacher

Title: Senior Regulatory Tech Date: \_\_\_\_\_ Email: venessa.langmacher@pdce.co

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

## 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

COA Type	Description

## Best Management Practices

### No BMP/COA Type

### Description

No BMP/COA Type	Description
1 Construction	804. Visual Impact: Production facilities, regardless of construction date, which are observable from any public highway will be painted with uniform, non-contrasting, non-reflective color tones (similar to the Munsell Soil Color Coding System), and with colors matched to but slightly darker than the surrounding landscape.

2	Noise mitigation	604c.(2).A. Noise: WELL PAD: 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 was conducted to identify potential receptors within 1000 feet of the proposed pad site. There are five (5) building units of concern located 572' N, 578' SE, 844' NW, 900' NW and 996' NE. Light and sound mitigation will be installed to the North, Northwest, Northeast and Southeast of the proposed location. Methods of noise mitigation shall include but not be limited to hay bales, sound walls, or customized semi-trailers.
3	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.
4	Odor mitigation	805.b(1)-(c) Odors and Dust: Oil and gas facilities and equipment will operate in a manner that odors and dust do not constitute a nuisance or hazard to public welfare. Odors: Oil and gas operations will be in compliance with the Department of Public Health and Environment, Air Quality Control Commission, Regulation No. 2 Odor Emission, 5 C.C.R. 1001-4, Regulation No. 3 (5 C.C.R. 1001-5), and Regulation No. 7 Section XVII.B.1 (a-c) and Section XII. Dust: PDC will employ practices for control of fugitive dust caused by operations include but not limited to the use of speed restrictions, regular road maintenance, restriction of construction activity during high-wind days, and silica dust controls when handling sand used in hydraulic fracturing operations. When necessary, PDC coordinates dust mitigation with the county on gravel roads, places road base where allowed by surface owner around tanks and wellheads to minimize dust, and will water the roads and locations when dry. In addition, automation is used on all new wells to minimize truck traffic.
5	Drilling/Completion Operations	604.c.(2).W. Site Specific Measures: Lights should be turned downward and away from building units within the 1,000 foot buffer area. Dust mitigation will be provided as necessary on lease access roads.
6	Drilling/Completion Operations	604c.(2).I. BOPE Testing for Drilling Operations: PDC's contractors will supply a double ram BOPE (Blinds and pipes). BOPE is always function tested and all seals and ram block rubbers are inspected. 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 with a third party tester, all tests are digitally recorded and any failed equipment or seals are replaced and re-tested.
7	Drilling/Completion Operations	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.
8	Drilling/Completion Operations	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.
9	Drilling/Completion Operations	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.
10	Drilling/Completion Operations	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.

11	Drilling/Completion Operations	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	Drilling/Completion Operations	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.
13	Drilling/Completion Operations	Prior to drilling operations, Operator will perform an anti-collision scan of existing offset wells that have the potential of being within close proximity of the proposed well. This anti-collision scan will include definitive MWD or gyro surveys of the offset wells with included error of uncertainty per survey instrument, and compared against the proposed wellpath with its respective error of uncertainty. If current surveys do not exist for the offset wells, Operator may have gyro surveys conducted to verify bottomhole location. The proposed well will only be drilled if the anti-collision scan results indicate that there is not a risk for collision, or harm to people or the environment. For the proposed well, upon conclusion of drilling operations, an as-constructed gyro survey will be submitted to COGCC with the Form 5.
14	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.
15	Drilling/Completion Operations	One of the first wells drilled on the pad will be logged with Cased hole Pulsed Neutron Log with Gamma Ray Log from KOP 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 clearly state "No open-hole logs were run" and shall reference the Rule 317.p Exception granted for the well.

Total: 15 comment(s)

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

Policy
Notice Concerning Operating Requirements for Wildlife Protection. <a href="http://cogcc.state.co.us/documents/reg/Policies/Wildlife_Notice.pdf">http://cogcc.state.co.us/documents/reg/Policies/Wildlife_Notice.pdf</a>

### **Attachment Check List**

<b>Att Doc Num</b>	<b>Name</b>
400975682	FORM 2 SUBMITTED
401016698	FORM 2 SUBMITTED
401016699	FORM 2 REJECTED
401020992	PROPOSED SPACING UNIT
401020993	STIMULATION SETBACK CONSENT
401020995	WELL LOCATION PLAT
401020996	DEVIATED DRILLING PLAN
401020997	OPEN HOLE LOGGING EXCEPTION
401021014	EXCEPTION LOC REQUEST
401021016	SURFACE AGRMT/SURETY
401021018	EXCEPTION LOC WAIVERS
401021020	EXCEPTION LOC REQUEST
401021021	EXCEPTION LOC WAIVERS

Total Attach: 13 Files

**General Comments**

<b>User Group</b>	<b>Comment</b>	<b>Comment Date</b>

Total: 0 comment(s)