

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:

400882806

Date Received:

08/12/2015

#### APPLICATION FOR PERMIT TO:

☒ Drill ☐ Deepen ☐ Re-enter ☐ Recomplete and Operate

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

Refilling ☒

ZONE TYPE SINGLE ZONE ☒ MULTIPLE ZONES ☐ COMMINGLE ZONES ☐

Sidetrack ☐

Well Name: Helton

Well Number: 5-63-27-3340BH

Name of Operator: BARRETT CORPORATION\* BILL

COGCC Operator Number: 10071

Address: 1099 18TH ST STE 2300

City: DENVER State: CO Zip: 80202

Contact Name: Mary Pobuda

Phone: (303)312-8511

Fax: (303)291-0420

Email: mpobuda@billbarrettcop.com

#### RECLAMATION FINANCIAL ASSURANCE

Plugging and Abandonment Bond Surety ID: 20040060

#### WELL LOCATION INFORMATION

QtrQtr: NWSW Sec: 27 Twp: 5N Rng: 63W Meridian: 6

Latitude: 40.369940

Longitude: -104.427030

Footage at Surface: 2439 feet FNL/FSL FSL 1135 feet FEL/FWL FWL

Field Name: WATTENBERG

Field Number: 90750

Ground Elevation: 4542

County: WELD

GPS Data:

Date of Measurement: 05/03/2013 PDOP Reading: 2.0 Instrument Operator's Name: Brian Rottinghaus

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

Footage at Top of Prod Zone: FNL/FSL FSL 2100 FSL 650 FWL 2100 FSL 500 FEL FEL  
Sec: 27 Twp: 5N Rng: 63W Sec: 27 Twp: 5N Rng: 63W

#### 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.)

See lease map

Total Acres in Described Lease: 800 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: 500 Feet

## CULTURAL DISTANCE INFORMATION

Distance to nearest:

Building: 659 Feet  
Building Unit: 797 Feet  
High Occupancy Building Unit: 5280 Feet  
Designated Outside Activity Area: 5280 Feet  
Public Road: 4775 Feet  
Above Ground Utility: 231 Feet  
Railroad: 5280 Feet  
Property Line: 367 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: \_\_\_\_\_

## 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

The proposed spacing unit is 160 acres comprised of the N/2 S/2.

## 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		160	GWA

## DRILLING PROGRAM

Proposed Total Measured Depth: 10882 Feet

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

285 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:

Beneficial reuse or land application plan submitted? Yes

Reuse Facility ID: 436891 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
CONDUCTOR	20	16	65	0	60	50	60	0
SURF	13+1/2	9+5/8	36	0	800	430	800	0
1ST	8+3/4	7	26	0	6865	570	6865	600
1ST LINER	6+1/8	4+1/2	11.6	6000	10882			

☐ 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 No changes are necessary from the original approved permit. Please note that this is an existing pad with producing wells on it.

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

Location ID: 434121

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: Mary Pobuda

Title: Permit Analyst Date: 8/12/2015 Email: mpobuda@billbarrettcorp.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:  Director of COGCC Date: 2/27/2016

Expiration Date: 02/26/2018

### API NUMBER

05 123 37960 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

	1) Bradenhead test shall be performed within 30 days of rig release and prior to stimulation. Test results shall be submitted on Form 17 within 10 days of test. 2) Bradenhead test shall be performed between 6 and 7 months after rig release and shall be submitted on Form 17 within 10 days of test. 3) Bradenhead test shall be performed within 30 days of First Production as reported on Form 5A and shall be submitted on Form 17 within 10 days of test.
	Approval of this refile APD does not provide relief from compliance with the COGCC Reclamation Rules.
	1) Submit Form 42 electronically to COGCC 48 hours prior to MIRU. 2) Comply with Rule 317.j and provide cement coverage from end of 7" casing to a minimum of 200' above Niobrara. Verify coverage with cement bond log. 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.

## Best Management Practices

### No BMP/COA Type

### Description

1	Traffic control	The access road is existing, Weld county did not require an encroachment permit for this location. The access is properly constructed to accommodate emergency vehicle access.
2	General Housekeeping	Trash would be contained in a trash cage and hauled away to an approved disposal.
3	Material Handling and Spill Prevention	-Employ a spill response plan (SPCC) for all facilities. -Conduct routine informal inspections of all tanks and storage facilities at least weekly. -Tank batteries would be placed within secondary containment consisting of corrugated steel containment rings and sized to provide containment for 150% of the largest single tank.
4	Material Handling and Spill Prevention	Fire hazards not in use to be a minimum of 25' from wellhead, tanks and separator. Automation equipment for tank level and pressure monitoring would be utilized. Loadlines to be bullplugged or capped.
5	Dust control	During construction and operation, operator shall implement dust abatement measures as needed to prevent fugitive dust from vehicular traffic, equipment operations, or wind events. Abatement measures may include road maintenance, speed restrictions, and silica dust controls when handling sand used during hydraulic fracturing.
6	Construction	Containment berms shall be constructed of steel rings and will be constructed as per COGCC rule requirements. The entire pad is currently fenced with a cattle guard for access.
7	Noise mitigation	BBC will adhere to the COGCC Rule 604.c(2)A and 802 for allowable noise levels. Where possible, mufflers on the drilling rig and completion equipment would be oriented to minimize engine noise. If necessary, other noise reduction measures could include plumbing dumb lines into tanks to muffle sounds and installation of rubber cushions in plunger lift lubricators to muffle plunger lift sound.

8	Emissions mitigation	<p>During flowback operations BBC will follow this general procedure:</p> <ul style="list-style-type: none"> <li>-Wells will flowback to open top tanks during drillout until sufficient gas pressure is present to allow proper operation of a 3-phase flowback separator</li> <li>-Fluid from flowback separators will dump water/oil to a PT tank; water will dump to closed top frac tanks equipped with a vapor combustor (vapor combustor will have auxiliary fuel to maintain pilot)</li> <li>-PT tank will dump oil to BBC production equipment</li> <li>-Flash vapors off of PT tank will be combusted in flow back flare which will also be equipped with auxiliary fuel</li> <li>-Once gas rate exceeds 200 mcf/d off of any Well all flow will be diverted to BBC production equipment and ultimately into a gas gathering system</li> </ul>
9	Odor mitigation	Where practicable, drilling rig and completion equipment exhaust would be oriented away from the building unit.
10	Drilling/Completion Operations	<p>Anti-collision Mitigation:</p> <p>Prior to drilling operations, Operator will perform a risk analysis of the potential for subsurface collision with existing offset wells within close proximity of the proposed well, taking into consideration the possibility of well path drift for both the existing and proposed wells. Where inclination, MWD or gyro surveys of the offset wells are available, or can be reasonably obtained by the operator, such surveys shall be incorporated in the risk analysis, taking into account survey instrument margin of error. Commission engineering staff shall review and approve the collision risk analysis prior to issuing an approved permit to drill, subject to the operator's right to appeal to the Director or the Commission. For the proposed well, upon conclusion of drilling operations, an as-constructed final directional survey will be submitted to the COGCC with the Form 5.</p>
11	Drilling/Completion Operations	BBC will adhere to the COGCC Policy for Bradenhead Monitoring effective 5/29/12.
12	Drilling/Completion Operations	One of the first wells drilled will be logged with open-hole Resistivity Log and 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 and have those logs attached. The Form 5 for a well without open-hole logs shall clearly state "No open-hole logs were run" and shall clearly identify (by API#, well name & number) the well in which open-hole logs were run.
13	Drilling/Completion Operations	Light sources would be directed downwards and away from occupied structures. No permanent lighting will be on site.
14	Drilling/Completion Operations	A closed loop drilling system will be utilized.
15	Drilling/Completion Operations	BOP equipment will be utilized as per COGCC requirements. Adequate equipment will be utilized as per rule requirements.
16	Final Reclamation	<p>BBC to follow Rule 1004a which requires all equipment to be removed within 90 days of plugging a well.</p> <p>BBC to follow Rule 319a(5), requiring identification of P&amp;Ad wells with a permanent monument.</p>

Total: 16 comment(s)

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

Policy
<p>Notice Concerning Operating Requirements for Wildlife Protection.</p> <p><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></p>
<p>Policy for Bradenhead Monitoring During Hydraulic Fracturing Treatments in the Greater Wattenberg Area.</p> <p><a href="http://cogcc.state.co.us/documents/reg/Policies/PolicyGwaBradenheadMonitoringFinal.pdf">http://cogcc.state.co.us/documents/reg/Policies/PolicyGwaBradenheadMonitoringFinal.pdf</a></p>

### **Attachment Check List**

<u>Att Doc Num</u>	<u>Name</u>
400882806	FORM 2 SUBMITTED
400891846	OffsetWellEvaluations Data

Total Attach: 2 Files

### General Comments

<u>User Group</u>	<u>Comment</u>	<u>Comment Date</u>
Permit	Final review complete.	2/23/2016 2:15:18 PM
Permit	Operator provided BMP's to be added to form.  Permit task passed.	2/12/2016 8:11:30 AM
Permit	On hold- Waiting on operator to provide mitigation BMP's.	2/2/2016 2:14:44 PM
Permit	Added OGLA task to have operator submit designated setback mitigation BMP's for location.	1/25/2016 11:44:50 AM
Engineer	Offset Wells Evaluated with original APD submittal.	9/15/2015 2:00:59 PM
Permit	Passes completeness. Refile comment is adequate.	9/1/2015 4:08:59 PM
Permit	Return to draft Please add the second refile comment "I certify that there have been no changes on land use, lease description".	8/31/2015 2:55:57 PM
Permit	Returned to draft. 1.) Missing 317.p BMP. 2.) Please add the second refile comment "I certify that there have been no changes on land use, lease description". 3.) Please provide the Offset Well Evaluation data and input the Operator's Wellbore Integrity Contact email."	8/17/2015 3:33:57 PM

Total: 8 comment(s)