

FORM

2

Rev
08/16

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:

401386307

APPLICATION FOR PERMIT TO:

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

Date Received:

08/30/2017

TYPE OF WELL OIL ☒ GAS ☐ COALBED ☐ OTHER _____Refilling ☐ZONE TYPE SINGLE ZONE ☒ MULTIPLE ZONES ☐ COMMINGLE ZONES ☐Sidetrack ☐

Well Name: Cottonwood Creek

Well Number: 4-65 27-28 4BH

Name of Operator: BURLINGTON RESOURCES OIL & GAS LP

COGCC Operator Number: 26580

Address: 600 N DAIRY ASHFORD RD

City: HOUSTON State: TX Zip: 77079

Contact Name: Jennifer Dixon

Phone: (832)4863346

Fax: ()

Email: jennifer.a.dixon@cop.com

RECLAMATION FINANCIAL ASSURANCE

Plugging and Abandonment Bond Surety ID: 19920030

WELL LOCATION INFORMATION

QtrQtr: SWSE Sec: 27 Twp: 4S Rng: 65W Meridian: 6

Latitude: 39.668464

Longitude: -104.645950

Footage at Surface: 390 Feet FNL/FSL FSL 1410 Feet FEL/FWL FEL

Field Name: WILDCAT

Field Number: 99999

Ground Elevation: 5757

County: ARAPAHOE

GPS Data:

Date of Measurement: 06/07/2017 PDOP Reading: 1.3 Instrument Operator's Name: Greg Weimer

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

 900 FSL 460 FEL 900 FSL 325 FWL
 Sec: 27 Twp: 4S Rng: 65W Sec: 28 Twp: 4S Rng: 65W

LOCATION SURFACE & MINERALS & RIGHT TO CONSTRUCT

Surface Ownership: ☒ Fee ☐ State ☐ Federal ☐ IndianThe 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.)

All of Section 27, T4S, R65W

Total Acres in Described Lease: 640 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: 1652 Feet

Building Unit: 1652 Feet

High Occupancy Building Unit: 5280 Feet

Designated Outside Activity Area: 5280 Feet

Public Road: 382 Feet

Above Ground Utility: 1497 Feet

Railroad: 5280 Feet

Property Line: 318 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: 317 Feet

Distance from Completed Portion of Wellbore to Nearest Unit Boundary 460 Feet (Enter 5280 for distance greater than 1 mile.)

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

SPACING & FORMATIONS COMMENTS

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 | 535-883 | 1280 | S. 27-28 All |

DRILLING PROGRAM

Proposed Total Measured Depth: 18395 Feet

Distance from the proposed wellbore to nearest existing or proposed wellbore belonging to another operator, including plugged wells:

Enter distance if less than or equal to 1,500 feet: _____ Feet ☒ No well belonging to another operator within 1,500 feet

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? Yes

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 609

DRILLING WASTE MANAGEMENT PROGRAM

Drilling Fluids Disposal: OFFSITE Drilling Fluids Disposal Methods: Recycle/reuse

Cuttings Disposal: OFFSITE Cuttings Disposal Method: Commercial Disposal

Other Disposal Description:

Burlington Resources uses a closed loop, pitless system for their drilling fluids. They use tanks and shakers, recondition and reuse the fluids on the next location.

Beneficial reuse or land application plan submitted? _____

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 |
|-------------|--------------|----------------|-------|---------------|---------------|-----------|---------|---------|
| CONDUCTOR | 24 | 16 | 65 | 0 | 100 | 0 | 100 | 0 |
| SURF | 12+1/4 | 9+5/8 | 36 | 0 | 2220 | 600 | 2220 | 0 |
| 1ST | 8+1/2 | 5+1/2 | 23 | 2220 | 18395 | 2280 | 18395 | 2220 |

☐ 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 ☐ The BHL extends 135 feet beyond the production zone.
☐ The wellbore will not be completed or produced within the required 460' setback.

This application is in a Comprehensive Drilling Plan No CDP #: _____

Location ID: 453244

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: Deidre Duffy

Title: Project Ecologist Date: 8/30/2017 Email: dduffy@ltenv.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: 1/11/2018

Expiration Date: 01/10/2020

API NUMBER

05 005 07329 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

| | |
|--|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| | Bradenhead tests shall be performed and reported according to the following schedule and Form 17 submitted within 10 days of each test: 1) Within 60 days of rig release, prior to stimulation. 2) 6 months after rig release, prior to stimulation (delayed completions). 3) Within 30 days of first production, as reported on Form 5A. |
| | 1) Submit Form 42 electronically to COGCC 48 hours prior to MIRU for the first well activity with a rig on the pad and provide 48 hour spud notice via Form 42 for all subsequent wells drilled on the pad. 2) Comply with Rule 317.j. and provide cement coverage from TD to a minimum of 200' above Niobrara. Verify coverage with cement bond log. |

Best Management Practices

| <u>No</u> | <u>BMP/COA Type</u> | <u>Description</u> |
|------------------|--------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1 | Drilling/Completion Operations | One of the first wells drilled on the pad 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. |

Total: 1 comment(s)

Applicable Policies and Notices to Operators

| |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Policy |
| Notice Concerning Operating Requirements for Wildlife Protection. http://cogcc.state.co.us/documents/reg/Policies/Wildlife_Notice.pdf |

Attachment Check List

| <u>Att Doc Num</u> | <u>Name</u> |
|---------------------------|------------------------|
| 401386307 | FORM 2 SUBMITTED |
| 401386484 | DIRECTIONAL DATA |
| 401386502 | WELL LOCATION PLAT |
| 401386506 | DEVIATED DRILLING PLAN |
| 401402347 | SURFACE AGRMT/SURETY |
| 401402490 | DIRECTIONAL DATA |

Total Attach: 6 Files

General Comments

| <u>User Group</u> | <u>Comment</u> | <u>Comment Date</u> |
|-------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------|
| Permit | Added Location ID#; changed "this application submitted with an OGLA" from YES to NO, as the associated Form 2A has already been approved. Final review complete. | 01/09/2018 |
| Permit | IN PROCESS - Operator has submitted sundry notices to abandon the Cherry Creek Vista permits. | 12/21/2017 |
| Permit | Operator no longer plans to drill the Cottonwood Creek 4-65 27-284BH Pilot Hole (APD doc# 401386562 has been withdrawn). Open hole logging BMP has been revised to reflect this change and sidetrack description comment has been deleted from the Submit tab. | 12/14/2017 |
| Permit | ON HOLD - overlapping DSUs: spacing order 535-97 [Sec 28, 2 horizontal NBRR permitted with the Cherry Creek Vista 4-65 28 2H_D (005-07297) and Cherry Creek Vista 4-65 28 1H (005-07227)]; spacing order 535-883 overlaps (Sec 27-28 all) allows 4 horizontal NBRR wells, but does not clarify inclusion or exclusion of Cherry Creek Vista wells or status of order 535-97. Request 535-97 be vacated and Cherry Creek Vista permits be abandoned. | 12/14/2017 |
| Permit | Permitting review complete. This application is pending Pilot Hole API#. | 11/15/2017 |
| Permit | Status Active - corrections made with Operator concurrence: - Operator confirmed Surface Owner is NOT Mineral Owner; unchecked associated boxes. - Changed distance to nearest wellbore in same formation from 435' to 317'. - Deleted pending docket comment, added spacing order number, unit acreage, and unit config. - Added comment to Disposal Description. - Revised open hole logging BMP. | 11/15/2017 |
| Permit | Status Pending - contacted Operator for corrections: - All boxes checked for Surface Owner is mineral owner, is committed, and has signed lease, but associated 2A has none of these boxes checked. Verify and correct where needed. - Distance to nearest wellbore in same formation (435') incorrect; should measure to Cottonwood Creek 4AH, ~300'. - Associated 2A has the comment "Burlington Resources uses a closed loop, pitless system for their drilling fluids. They use tanks and shakers, recondition and reuse the fluids on the next location."; add this to Disposal Description. - Revise BMP to reflect the open hole logging requirements will be met on the Cottonwood Creek 4BH Pilot Hole. | 10/24/2017 |
| Permit | Passed Completeness. | 09/21/2017 |
| Permit | Returned to draft: - Contact and Submitter info should be switched. - If Surface Owner is not Mineral Owner, they cannot be committed to or sign lease. - Imported directional data is for the pilot hole; delete and reimport full data for this horizontal wellbore. - Check box "no offset well within 1500" on Offset Wells Eval tab. - Missing Related Forms doc # for associated Form 2A. | 09/11/2017 |

Total: 9 comment(s)