

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:  
401335379

APPLICATION FOR PERMIT TO:

Drill       Deepen       Re-enter       Recomplete and Operate

TYPE OF WELL    OIL     GAS     COALBED     OTHER \_\_\_\_\_  
ZONE TYPE      SINGLE ZONE     MULTIPLE ZONES     COMMINGLE ZONES

Refiling   
Sidetrack

Date Received:  
11/22/2017

Well Name: Sack      Well Number: 21-4-17HC  
Name of Operator: WARD PETROLEUM CORPORATION      COGCC Operator Number: 10359  
Address: 215 WEST OAK STREET #1000  
City: FORT COLLINS      State: CO      Zip: 80521  
Contact Name: Marshall Hall      Phone: (970)449-4634      Fax: ( )  
Email: marshall@wardpetroleumfc.com

RECLAMATION FINANCIAL ASSURANCE

Plugging and Abandonment Bond Surety ID: 20100221

WELL LOCATION INFORMATION

QtrQtr: SWSW      Sec: 21      Twp: 1N      Rng: 66W      Meridian: 6  
Latitude: 40.031720      Longitude: -104.789920

Footage at Surface: 832 Feet      FNL/FSL      FSL      434 Feet      FEL/FWL      FWL

Field Name: WATTENBERG      Field Number: 90750  
Ground Elevation: 5018      County: WELD

GPS Data:  
Date of Measurement: 09/22/2017      PDOP Reading: 1.1      Instrument Operator's Name: Scott Estabrooks

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  
1500      FSL      460      FWL      1500      FSL      460      FEL  
Sec: 21      Twp: 1N      Rng: 66W      Sec: 21      Twp: 1N      Rng: 66W

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.)

T1N R66W Sec. 21: S/2, less and except Lot A (18.03 acres) and Lot B (62.00 acres), and a 21.41 acre tract.

Total Acres in Described Lease: 217 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: 589 Feet  
 Building Unit: 589 Feet  
 High Occupancy Building Unit: 5280 Feet  
 Designated Outside Activity Area: 5280 Feet  
 Public Road: 425 Feet  
 Above Ground Utility: 414 Feet  
 Railroad: 5280 Feet  
 Property Line: 434 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: 10/19/2017

**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: 160 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.) |
|------------------------|----------------|-------------------------|-------------------------------|--------------------------------------|
| CODELL                 | CODL           | 407-1709                | 320                           | Sec. 21: S2                          |

## DRILLING PROGRAM

Proposed Total Measured Depth: 12251 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: 525 Feet  No well belonging to another operator within 1,500 feet

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: Commercial Disposal

Cuttings Disposal: OFFSITE Cuttings Disposal Method: Commercial Disposal

Other Disposal Description:

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 |
|-------------|--------------|----------------|-------|---------------|---------------|-----------|---------|---------|
| SURF        | 13+1/2       | 9+5/8          | 30    | 0             | 1500          | 786       | 1500    | 0       |
| 1ST         | 8+3/4        | 5+1/2          | 20    | 0             | 12251         | 1571      | 12251   |         |

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 from completed portion of proposed wellbore to nearest completed portion of offset wellbore permitted or completed in the same formation was measured to the proposed Sack 21-4-16HNB. Distance from the proposed wellbore to nearest existing or proposed wellbore belonging to another operator, including plugged wells was measured to the Brewster Laws #1 operated by Patina Oil & Gas.

The exception location waiver is stated within the Surface Use Agreement on page 5, section 22.

This location has been built and one well has been drilled.

Questions regarding the permit, please contact Andrea Gross. For Offset Well Evaluation please contact Marshall Hall.

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

Location ID: 446474

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: Andrea Gross

Title: Permit Agent Date: 11/22/2017 Email: agross@upstreampm.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: 6/9/2018

Expiration Date: 06/08/2020

**API NUMBER**

05 123 46998 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>   |
|-----------------|--|
|                 | This Permit to Drill is approved subject to all the BMPs and COAs on the most recently approved Form 2A and any subsequently approved Form 4 for the Oil and Gas Location (Location ID #446474). The most recently approved Form 2A and any subsequent Form 4s containing applicable COAs for this location shall be posted onsite during construction, drilling, and completions operations.  |
|                 | Operator shall comply with Notice to Operators: Interim Reclamation Procedures for Delayed Operation (dated January 5, 2017).  |
|                 | If conductors are preset, Operator shall comply with Notice to Operators: Procedures for Preset Conductors (dated September 1, 2016, revised October 6, 2016).   |
|                 | Operator acknowledges the proximity of the listed non-operated well. Operator assures that this offset will be remediated per the DJ Basin Horizontal Offset Policy (option 3). Operator will submit a Form 42 ("OFFSET MITIGATION COMPLETED") stating what appropriate mitigation occurred and that it has been completed, prior to the hydraulic stimulation of this well.<br>05-123-07658, BREWSTER-LAWS 1  |
|                 | 1) Submit Form 42 electronically to COGCC 48 hours prior to MIRU (spud notice) 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.<br>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.   |
|                 | Bradenhead tests shall be performed according to the following schedule and the Form 17 submitted within 10 days of each test:<br>1) Within 60 days of rig release and prior to stimulation and<br>2) If a delayed completion, 6 months after rig release and prior to stimulation.<br>3) Within 30 days after first production, as reported on Form 5A.<br>If a bradenhead test reports a surface casing pressure greater than 200 psig stimulation is not allowed until the Engineering Supervisor has been consulted. |

## Best Management Practices

| No | <u>BMP/COA Type</u>            | <u>Description</u>  |
|----|--------------------------------|---|
| 1  | Drilling/Completion Operations | Anti-Collision: Ward will perform an anti-collision evaluation of all active (producing, shut in, or temporarily abandoned) offset wellbores that have the potential of being within 150 feet of a proposed well prior to drilling operations for the proposed well. Notice will be given to all offset operators within 150 feet prior to drilling.  |
| 2  | Drilling/Completion Operations | <p>BOPE Testing: Upon initial rig-up and once every 30 days during drilling operations, pressure testing of the casing string and each component of the BOPE will be performed to 70% of working pressure or 70% of the internal yield of the casing, whichever is less.</p> <p>BOPE for well servicing operations: Adequate blowout prevention equipment will be used on any servicing operations associated with this well. Backup stabbing valves shall be required on well servicing operations during reverse circulation. Valves will be pressure tested before each well servicing operation using both low-pressure and high-pressure fluid.</p> <p>BOPE: Ward will utilize drilling rigs with a minimum of a double ram and annular preventer.</p> |
| 3  | 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.        |
| 4  | Drilling/Completion Operations | Operator acknowledges and will comply with COGCC policy for Bradenhead Monitoring during Hydraulic fracturing treatments in the Greater Wattenberg Area dated May 29, 2012.   |

Total: 4 comment(s)

## Applicable Policies and Notices to Operators

Notice Concerning Operating Requirements for Wildlife Protection.  
[http://cogcc.state.co.us/documents/reg/Policies/Wildlife\\_Notice.pdf](http://cogcc.state.co.us/documents/reg/Policies/Wildlife_Notice.pdf)

Policy for Bradenhead Monitoring During Hydraulic Fracturing Treatments in the Greater Wattenberg Area.  
<http://cogcc.state.co.us/documents/reg/Policies/PolicyGwaBradenheadMonitoringFinal.pdf>

## Attachment Check List

| <u>Att Doc Num</u> | <u>Name</u>                |
|--------------------|----------------------------|
| 401335379          | FORM 2 RESUBMITTED         |
| 401467122          | FORM 2 SUBMITTED           |
| 401467123          | FORM 2 REJECTED            |
| 401467183          | OffsetWellEvaluations Data |
| 401467184          | EXCEPTION LOC REQUEST      |
| 401467185          | DEVIATED DRILLING PLAN     |
| 401467186          | WELL LOCATION PLAT         |
| 401467187          | SURFACE AGRMT/SURETY       |
| 401467188          | DIRECTIONAL DATA           |
| 401668520          | OFFSET WELL EVALUATION     |

Total Attach: 10 Files

### General Comments

| <u>User Group</u> | <u>Comment</u>   | <u>Comment Date</u> |
|-------------------|--|---------------------|
| Permit            | Final review complete.   | 06/08/2018          |
| Permit            | Operator clarified the lease is the entire SW4 Sec 21, plus a portion of the SE4, for a total of 217 acres.<br><br>Permitting review complete.   | 06/08/2018          |
| Permit            | Status Active - corrections made with Operator concurrence:<br>- changed the distance to lease line from 460' to 0'.<br>- revised the open hole logging BMP.<br>- revised the well name cited on Submit tab as nearest wellbore in same formation.   | 06/08/2018          |
| Permit            | Status Pending - contacted Operator for corrections:<br>- lease description is not adequate to determine lease boundaries; cannot verify if wellbore crosses lease line.<br>- nearest well in same formation listed on Submit tab is not an existing or planned well; revise distance/comment.<br>- open hole log run on existing well cited in BMP has not yet been processed; request changing BMP to standard language in lieu of logs not yet available. | 06/06/2018          |
| Permit            | Passed completeness.   | 11/22/2017          |
| Permit            | REJECTION COMMENT: The operator has requested this APD be rejected per the Rejection Process criteria that a pad of Form 2's requiring a total of four or more attachments to be revised will be rejected. This pad's Spacing order changed the unit and cannot be approved as submitted. The Spacing order change will cause most of the attachments to be revised for a total of 5 APD's. Operator and COGCC staff has been consulted.                     | 11/22/2017          |
| Permit            | Per operator changed spacing order, acreage & unit configuration.  | 09/13/2017          |
| Permit            | Passed Completeness.   | 07/17/2017          |

Total: 8 comment(s)