

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:

400875733

#### 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 ☐

Date Received:

08/18/2015

Well Name: Ward Riverdale

Well Number: 14-4-9HN

Name of Operator: WARD PETROLEUM CORPORATION

COGCC Operator Number: 10359

Address: PO BOX 1187

City: ENID State: OK Zip: 73702

Contact Name: Andrea Gross

Phone: (303)942-0506

Fax: ( )

Email: agross@upstreampm.com

#### RECLAMATION FINANCIAL ASSURANCE

Plugging and Abandonment Bond Surety ID: 20100221

#### WELL LOCATION INFORMATION

QtrQtr: NWSW Sec: 14 Twp: 1S Rng: 67W Meridian: 6

Latitude: 39.962970

Longitude: -104.864230

Footage at Surface: 1925 feet FNL/FSL FSL 335 feet FEL/FWL FWL

Field Name: WATTENBERG

Field Number: 90750

Ground Elevation: 5112

County: ADAMS

GPS Data:

Date of Measurement: 10/02/2014 PDOP Reading: 2.0 Instrument Operator's Name: Trevor Daley

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  
1760 FSL 460 FWL 1760 FSL 460 FEL  
Sec: 14 Twp: 1S Rng: 67W Sec: 14 Twp: 1S Rng: 67W

#### 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: applicant is owner

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 attached lease map.

Total Acres in Described Lease: 205 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: 415 Feet  
Building Unit: 576 Feet  
High Occupancy Building Unit: 5280 Feet  
Designated Outside Activity Area: 5280 Feet  
Public Road: 682 Feet  
Above Ground Utility: 316 Feet  
Railroad: 5280 Feet  
Property Line: 335 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: 04/24/2015

Date of Rule 305.a.(2) Buffer Zone Notification to Building Unit Owners: 12/03/2014

## 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: 880 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

Ward Petroleum Corporation has been granted a forced pooling of Sec. 14 under Docket 407-1076.

## 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	407-1038	640	All

## DRILLING PROGRAM

Proposed Total Measured Depth: 12447 Feet

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

440 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? 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 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	36	0	1500	509	1500	0
1ST	8+3/4	5+1/2	20	0	12447	1600	12447	0

☒ 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 the wellbore to nearest wellbore permitted or completed in the same formation was measured to the Ward Riverdale 14-4-7HN. Distance to nearest permitted or existing wellbore penetrating objective formation was measured to the Ward Riverdale 14-4-8HC.

Ward Petroleum is the surface owner and applicant for this location.

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

Location ID: 441677

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: 8/18/2015 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: 12/13/2015

Expiration Date: 12/12/2017

### API NUMBER

05 001 09925 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

NOTE: Surface casing setting depth change from 1200' to 1500'. Increase cement coverage accordingly.  
1) Submit Form 42 electronically to COGCC 48 hours prior to MIRU for first well on pad, subsequent wells 48 hours prior to spud.  
2) Comply with Rule 317.j. and provide cement coverage from TD to a minimum of 200' above Niobrara and from 200' below Sussex to 200' above Sussex. Verify coverage with cement bond log.

## Best Management Practices

No	BMP/COA Type	Description
1	Material Handling and Spill Prevention	Leak Detection Plan: To ensure protection for the surface during fracturing treatment, the location will be specifically constructed to contain any releases or spills. Secondary containment from any chemical spills or leaks will surround any trucks that carry, mix, or add chemicals to the flow stream as well as connections that could possibly leak fluid. Should any spill or release occur, every reasonable step will be taken to quickly remediate the area disturbed.
2	Material Handling and Spill Prevention	Control of Fire Hazards: Ward and its contractor's employ best management practices during the drilling and production of its wells and facilities. They will comply with appropriate COGCC and any county rules concerning fire and safety. Ward will ensure that any flammable material will remain no less than 25 feet from the wellhead (s), tanks and separator (s).
3	Material Handling and Spill Prevention	Berm Construction: A containment berm will be constructed around the oil and water storage tanks. The berm will be inspected regularly and maintained in good condition.
4	Material Handling and Spill Prevention	Tank specifications: Tanks shall be constructed and maintained in accordance with the National Fire Protection Association Code 30 (2008 version). All tanks will be visually inspected once a day for issues. Recorded inspections will be conducted once a month pursuant to 40 CFR 112.
5	Dust control	Dust Control: Ward will comply with Rule 805.c and take all practicable measures to control fugitive dust caused by the operation, including to but not limited to wetting the soil with fresh water via a truck with a spreader bar if deemed necessary.
6	Noise mitigation	Noise Mitigation: Ward is planning on using sound walls to mitigate noise levels during drilling and completion. A background noise study will be done prior to drilling and the appropriate sound wall design will be chosen to meet or exceed COGCC noise requirements.
7	Drilling/Completion Operations	Closed Loop System: Closed Loop System will be used for drilling and fluid management. No reserve pit will be used.
8	Drilling/Completion Operations	Green Completions: Ward will comply with COGCC Rule 805b.(3)A and utilize Green Completion Methods.
9	Drilling/Completion Operations	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%
10	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.
11	Drilling/Completion Operations	BOPE for well servicing operations: Adequate blowout prevention equipment will be used on any servicing operations associated with this well. Backup staging 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.
12	Drilling/Completion Operations	BOPE: Ward will utilize drilling rigs with a minimum of a double ram and annular preventer.
13	Drilling/Completion Operations	Drill Stem Tests: Drill Stem Tests are not anticipated for this location.
14	Drilling/Completion Operations	Pit Level Indicators: Pit Level Indicators will not be needed as no pits will be used on location.
15	Drilling/Completion Operations	Visual Mitigation: Pursuant to Rule 804, the tank battery shall be painted in uniform, non-contrasting, non-reflective color tones with the colors matched to but slightly darker than the surrounding landscape.
16	Drilling/Completion Operations	All light will be directed downward as much as possible to mitigate light pollution into the adjacent neighborhood. In addition the sound wall will also help to limit light pollution.

Total: 16 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><u>Att Doc Num</u></b>	<b><u>Name</u></b>
400875733	FORM 2 SUBMITTED
400875815	OffsetWellEvaluations Data
400875819	DIRECTIONAL DATA
400875822	WASTE MANAGEMENT PLAN
400875823	LEASE MAP
400875824	WELL LOCATION PLAT
400875826	DEVIATED DRILLING PLAN
400889941	EXCEPTION LOC REQUEST

Total Attach: 8 Files

## General Comments

<u>User Group</u>	<u>Comment</u>	<u>Comment Date</u>
Permit	Final Review Completed.	12/8/2015 3:09:03 PM
OGLA	<p>Per Operator request, added the following BMPs.</p> <p>Dust Control: Ward will company with Rule 805.c and take all practicable measures to control fugitive dust caused by the operation, including to but not limited to wetting the soil with fresh water via a truck with a spreader bar if deemed necessary.</p> <p>Noise Mitigation: Ward is planning on using sound walls to mitigate noise levels during drilling and completion. A background noise study will be done prior to drilling and the appropriate sound wall design will be chosen to meet or exceed COGCC noise requirements.</p> <p>Visual Mitigation: Pursuant to Rule 804, the tank battery shall be painted in uniform, non-contrasting, non-reflective color tones with the colors matched to but slightly darker than the surrounding landscape.</p> <p>All light will be directed downward as much as possible to mitigate light pollution into the adjacent neighborhood. In addition the sound wall will also help to limit light pollution.</p>	12/7/2015 9:56:22 AM
OGLA	Missing Noise BMP, Odor BMP, Dust BMP, Lighting BMP and Anticollision	12/2/2015 5:51:29 PM
Permit	Permitting Review Complete.	10/13/2015 11:35:41 AM
Permit	Open Hole Logging BMP submitted by operator.	10/13/2015 11:35:40 AM
LGD	This site is accessed by an existing access point from Riverdale Rd. No new access point is approved / assumed by the approval of this access point.	9/11/2015 2:00:03 PM
LGD	The applicant shall obtain GOW permits for moving in, moving out, and a production permit if any part of the site goes into production, as well as an access permit Please contact Mark Russell at 720-523-6821 for all appropriate permits.	9/11/2015 1:59:31 PM
Permit	Pass completeness	8/27/2015 2:38:20 PM
Permit	<p>Returned to draft.</p> <p>1.) Exception Location Request attachment does not follow the guidelines.</p> <p>Corrected Plugging and abandonment ID number.</p>	8/24/2015 11:59:06 AM

Total: 9 comment(s)