

**APPLICATION FOR PERMIT TO:**

**Drill**       Deepen       Re-enter       Recomplete and Operate

TYPE OF WELL    OIL <input checked="" type="checkbox"/> GAS <input type="checkbox"/> COALBED <input type="checkbox"/> OTHER _____ ZONE TYPE       SINGLE ZONE <input checked="" type="checkbox"/> MULTIPLE ZONES <input type="checkbox"/> COMMINGLE ZONES <input type="checkbox"/>	Refiling <input checked="" type="checkbox"/> Sidetrack <input type="checkbox"/>
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Date Received:  
12/20/2016

Well Name: Todd Creek Farms      Well Number: 14-4-4HN

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: 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: SWNW      Sec: 14      Twp: 1S      Rng: 67W      Meridian: 6

Latitude: 39.967650      Longitude: -104.864230

Footage at Surface: <u>1628</u> Feet	FNL/FSL	FEL/FWL
<u>FNL</u> <u>337</u> Feet	<u>FNL</u> <u>337</u> Feet	<u>FWL</u>

Field Name: WATTENBERG      Field Number: 90750

Ground Elevation: 5082      County: ADAMS

GPS Data:  
Date of Measurement: 11/26/2013    PDOP Reading: 1.2    Instrument Operator's Name: Kyle Daley

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

Footage at Top of Prod Zone: <u>1320</u> Feet	FNL/FSL	FEL/FWL	Bottom Hole: <u>1320</u> Feet	FNL/FSL	FEL/FWL
<u>FNL</u> <u>460</u> Feet	<u>FNL</u> <u>460</u> Feet	<u>FWL</u>	<u>FNL</u> <u>460</u> Feet	<u>FNL</u> <u>460</u> Feet	<u>FEL</u>

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: 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.)

T1S R67W Sec. 14: NW; Sec. 15: All

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: 0 Feet

**CULTURAL DISTANCE INFORMATION**

Distance to nearest:

Building: 457 Feet  
 Building Unit: 524 Feet  
 High Occupancy Building Unit: 5280 Feet  
 Designated Outside Activity Area: 5280 Feet  
 Public Road: 674 Feet  
 Above Ground Utility: 220 Feet  
 Railroad: 5280 Feet  
 Property Line: 337 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: 12/16/2013

Date of Rule 305.a.(2) Buffer Zone Notification to Building Unit Owners: 12/16/2013

**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: 253 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**

Sec. 14 has been forced pool under Order No. 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	Sec 14: All

## DRILLING PROGRAM

Proposed Total Measured Depth: 12320 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: 225 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? No

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	12320	1582	12320	

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 casing and cement program has changed from the original filing. The location has not been built and all other information is consistent with the original filing. This pad has a valid Form 2A.

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

Location ID:       439721      

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:       12/20/2016       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).

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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:       Matthew Lee       Director of COGCC Date:       6/23/2017      

Expiration Date:       06/22/2019      

API NUMBER
05 001 09836 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>
	If location not built by 2A expiration 11/5/2017, Refile Form 2A must be approved prior to construction.
	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 #439721). 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 Operations (dated January 5, 2017).
	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.i and provide cement coverage from TD to a minimum of 200' above Niobrara and from 200' below Shannon to 200' above Sussex. Verify coverage with cement bond log.
	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. 3) Within 30 days of first production, as reported on Form 5A.

## Best Management Practices

<u>No</u>	<u>BMP/COA Type</u>	<u>Description</u>
1	Community Outreach and Notification	Ward held a Neighborhood Meeting per Adams County regulations on September 15, 2016.
2	Traffic control	Ward will construct all leasehold roads to accommodate local emergency vehicle access requirements and will be maintained in a reasonable condition. A Traffic Plan was submitted to Adams County with the submission of the Administrative Use by Special Review application.
3	Dust control	Dust mitigation measures shall include but are not limited to the use of speed restrictions, regular road maintenance, restrictions of construction activities during high wind days, and silica dust controls when handling sand used in hydraulic fracturing operations. The access road will be constructed with road base aggregate material. Additional management practices such as road surfacing, wind breaks and barriers may be used.
4	Noise mitigation	Noise: An Ambient Sound Study was conducted on this location. Due to its location within an Urban Mitigation Area, Ward will install temporary sound barriers around the wellpad during drilling and completion. Engine mufflers will be used during the drilling phase and completion phase.
5	Odor mitigation	Odor Mitigation: Ward will comply with Rule 805 and 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. They will utilize an Emission Control Devices to reduce odor emissions during production.

6	Drilling/Completion Operations	All permanent lighting will be directed downward and internally. Temporary lighting shall conform to COGCC rules and regulations and not adversely affect adjacent residential properties. Temporary lighting will be directed downward to minimize light. Sound walls will block temporary lighting.
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	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.
9	Drilling/Completion Operations	Green Completions: Emission Control Systems. Test separators and associated flow lines and sand traps shall be installed on-site to accommodate Green completion techniques pursuant to COGCC Rules.
10	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% of the internal yield of the casing, whichever is less.
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 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.
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	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.

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

### **Attachment Check List**

<b>Att Doc Num</b>	<b>Name</b>
401156374	FORM 2 SUBMITTED
401165184	OffsetWellEvaluations Data
401165186	EXCEPTION LOC WAIVERS
401170695	EXCEPTION LOC REQUEST
401317097	OFFSET WELL EVALUATION

Total Attach: 5 Files

### General Comments

<u>User Group</u>	<u>Comment</u>	<u>Comment Date</u>
Permit	OGLA passed task on doc #401153495. No comment added. Final Review Completed.	06/20/2017
Permit	The operator noted the changes made from the previously approved Form 2 in comments. The form 2A expires 11/5/2017 date. Surface Use Agreement on file has waivers for Rule 318A.a & 318A.c. Open Hole Logging BMP submitted by operator.  Permitting Review Complete.	06/19/2017
Engineer	Offset wells evaluated	01/23/2017
LGD	1.Adams County respectfully requests that the COGCC hold the permit until the operator has completed the local permit process.  2.Ensure that the operator has sufficient storage for all of the produced hydrocarbons, or that there is a pipeline in place prior to permit approval.  3.Attach all COAs from the local permit process to this permit.	01/23/2017
Permit	Passed completeness.	01/05/2017
Permit	Corrected Instr. Operator to Kyle Daley. Corrected name of Exception Location Waiver Attachment.	01/05/2017

Total: 6 comment(s)