

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 _____	Refiling <input type="checkbox"/>
ZONE TYPE SINGLE ZONE <input checked="" type="checkbox"/> MULTIPLE ZONES <input type="checkbox"/> COMMINGLE ZONES <input type="checkbox"/>	Sidetrack <input type="checkbox"/>

Date Received:
02/29/2016

Well Name: Rael Well Number: 34-4-2HC

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: SWSW Sec: 27 Twp: 1N Rng: 66W Meridian: 6

Latitude: 40.015840 Longitude: -104.771160

Footage at Surface: <u>320</u> feet	FNL/FSL	FEL/FWL
<u>FSL</u> <u>432</u> feet	<u>FSL</u>	<u>FWL</u>

Field Name: WATTENBERG Field Number: 90750

Ground Elevation: 5058 County: WELD

GPS Data:
Date of Measurement: 02/08/2016 PDOP Reading: 1.1 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
<u>485</u> <u>FNL</u> <u>460</u> <u>FWL</u>	<u>485</u> <u>FNL</u> <u>460</u> <u>FEL</u>				
Sec: <u>34</u> Twp: <u>1N</u> Rng: <u>66W</u>	Sec: <u>34</u> Twp: <u>1N</u> Rng: <u>66W</u>				

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: No

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.)

T1N R66W Section 34: NW/4

Total Acres in Described Lease: 160 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: 460 Feet

CULTURAL DISTANCE INFORMATION

Distance to nearest:

Building: 749 Feet
 Building Unit: 663 Feet
 High Occupancy Building Unit: 5280 Feet
 Designated Outside Activity Area: 5280 Feet
 Public Road: 307 Feet
 Above Ground Utility: 291 Feet
 Railroad: 5280 Feet
 Property Line: 320 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: 01/30/2016

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: 773 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	407-1316	320	N2

DRILLING PROGRAM

Proposed Total Measured Depth: 12446 Feet

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

773 Feet (Including plugged wells)

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? 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	36	0	1500	509	1500	0
1ST	8+3/4	5+1/2	20	0	12446	1601	12446	

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 exception location waiver is stated within the Surface Use Agreement on page 4, section 22. Distance from completed portion of the wellbore to nearest wellbore permitted or completed in the same formation was measured to the UPRR 50 Pan AM 1. Distance to nearest permitted or existing wellbore penetrating objective formation was measured to the UPRR 50 Pan AM 1.

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

Location ID: _____

Is this application being submitted with an Oil and Gas Location Assessment application? Yes

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: 2/29/2016 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).

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: 6/20/2016

Expiration Date: 06/19/2018

API NUMBER
05 123 43290 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>
	1) Submit Form 42 electronically to COGCC 48 hours prior to MIRU (spud notice) for the well. 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. 3) 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. 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. 4) Comply with COGCC Policy for Bradenhead Monitoring During Hydraulic Fracturing Treatments in the Greater Wattenberg Area dated May 29, 2012.
	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	Planning	Development from existing well pads: In order to reduce surface disturbance, Ward is permitting this 2A for eight (8) wells.
2	Planning	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.
3	Planning	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.
4	Planning	Visual Mitigation: 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.
5	Traffic control	Traffic Plan: A traffic plan will be done if request by Weld County.
6	Traffic control	Ward will construct all leasehold road to accommodate local emergency vehicle access requirements and will be maintained in a reasonable condition.
7	General Housekeeping	Guy Line Anchors: All guy line anchors left buried for future use will be identified by a marker of bright color not less than four feet in height and not greater than one foot east of the guy line anchor.
8	General Housekeeping	Removal of Surface Trash: Ward agrees that all trash, refuse pipe, equipment, liquids, chemicals of other materials that are not necessary for the continued operations of the wells will be removed and disposed of no later than 30 days after completion. No such items will be burned or buried on location.
9	Storm Water/Erosion Control	Site Specific Measures: Ward will maintain a Stormwater Management Plan with site specific measurements to assess erosion control.

10	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.
11	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).
12	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.
13	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.
14	Construction	Fencing: The wellsite will be fenced if requested by the Surface Owner.
15	Noise mitigation	A background noise study will be done prior to drilling and the appropriate mitigation measures (if necessary) will be chosen to meet or exceed COGCC noise requirements.
16	Odor mitigation	Operator will comply with Rule 805.c and take all practicable measures to control fugitive dust caused by the operation, including but not limited to wetting the soil with fresh water via a truck with a spreader bar if deemed necessary.
17	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.
18	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.
19	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.
20	Drilling/Completion Operations	BOPE for well servicing operations: Adequate blowout prevention equipment will be used on any servicing operations associated with this well. Backup staving 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.
21	Drilling/Completion Operations	BOPE: Ward will utilize drilling rigs with a minimum of a double ram and annular preventer.
22	Drilling/Completion Operations	Drill Stem Tests: Drill Stem Tests are not anticipated for this location.
23	Drilling/Completion Operations	Pit Level Indicators: Pit Level Indicators will not be needed as no pits will be used on location.
24	Final Reclamation	Identification of Plugged and Abandoned Wells: Pursuant to Rule 319.a.(5)., once the well has been plugged and abandoned, Ward will identify the location of the wellbore with a permanent monument that will detail the well name and date of plugging.
25	Final Reclamation	Well site cleared. Within 90 days subsequent to the time of plugging and abandonment of the entire site, superfluous debris and equipment shall be removed from the site.

Total: 25 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>
1696677	WELL LOCATION PLAT
2365191	SURFACE CASING CHECK
400995014	FORM 2 SUBMITTED
400996784	DIRECTIONAL DATA
400996787	DEVIATED DRILLING PLAN
400997125	WASTE MANAGEMENT PLAN
400997177	OffsetWellEvaluations Data
400998964	SURFACE AGRMT/SURETY

Total Attach: 8 Files

General Comments

<u>User Group</u>	<u>Comment</u>	<u>Comment Date</u>
Permit	Final Review Completed.	6/17/2016 1:29:58 PM
Permit	ON HOLD: w/o form 2A's.	6/15/2016 3:12:40 PM
Permit	Attached the corrected Well Location Plat with Top of zone. Permitting Review Complete.	5/1/2016 1:54:09 PM
Permit	Surface Use Agreement has waivers for Rule 318A.a & 318A.c. ON HOLD: requesting Well Location Plat with Top of zone noted.	5/26/2016 3:11:57 PM
Permit	Open Hole Logging BMP submitted by operator.	5/26/2016 3:11:56 PM
Engineer	Offset wells evaluated	5/6/2016 2:55:24 PM
Permit	Passed completeness.	3/2/2016 12:01:56 PM
Permit	Please attach a copy of the SUA signed by all parties.	3/2/2016 8:46:57 AM

Total: 8 comment(s)