

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:
04/04/2016

Well Name: Sack Well Number: 21-4-12HC

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: 21 Twp: 1N Rng: 66W Meridian: 6

Latitude: 40.031470 Longitude: -104.790180

Footage at Surface: 742 feet FSL 359 feet FWL

Field Name: WATTENBERG Field Number: 90750

Ground Elevation: 4958 County: WELD

GPS Data:
Date of Measurement: 02/08/2016 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
<u>485</u>	<u>FSL</u>	<u>460</u>	<u>485</u>	<u>FSL</u>	<u>460</u>
	<u>FWL</u>			<u>FEL</u>	
Sec: <u>21</u>	Twp: <u>1N</u>	Rng: <u>66W</u>	Sec: <u>21</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: 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: 460 Feet

CULTURAL DISTANCE INFORMATION

Distance to nearest:

Building: 528 Feet

Building Unit: 528 Feet

High Occupancy Building Unit: 5280 Feet

Designated Outside Activity Area: 5280 Feet

Public Road: 350 Feet

Above Ground Utility: 339 Feet

Railroad: 5280 Feet

Property Line: 359 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: 935 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	407-1125	640	S. 21:All

DRILLING PROGRAM

Proposed Total Measured Depth: 12457 Feet

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

565 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	12457	1602	12457	

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 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 MARRS 28C-28HZ.

The distance from proposed wellbore to nearest existing or permitted wellbore belonging to another Operator (including plugged wells) was measured to the MARRS 28C-28HZ.

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

This is a multi-well pad. However, only one well is being permitted at this time.

The Landing Point (TPZ) was added to the Well Location Plat by the Operator on 04/12/2016

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: 4/4/2016 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: 7/5/2016

Expiration Date: 07/04/2018

API NUMBER
05 123 43337 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>
	<p>Bradenhead tests shall be performed and reported according to the following schedule and Form 17 submitted within 10 days of each test.</p> <ol style="list-style-type: none"> 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.
	<ol style="list-style-type: none"> 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. 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) Operator will comply with COGCC Policy for Bradenhead Monitoring During Hydraulic Fracturing Treatments in the Greater Wattenberg Area dated May 29, 2012.

Best Management Practices

<u>No</u>	<u>BMP/COA Type</u>	<u>Description</u>
1	Planning	In order to reduce surface disturbance and require multiple well pads, Ward is permitting a mutli well pad.
2	Traffic control	Traffic Plan: A traffic plan will be done if request by Weld County. Ward will construct all leasehold road to accommodate local emergency vehicle access requirements and will be maintained in a reasonable condition.
3	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.
4	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.
5	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. If any spill or release occur, every reasonable step will be taken to quickly remediate the disturbed area.
6	Material Handling and Spill Prevention	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 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).
7	Material Handling and Spill Prevention	A containment berm or structure will be erected around the oil and water storage tanks. The berm will be inspected regularly and maintained in good condition.

8	Material Handling and Spill Prevention	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. Recorded inspections will be conducted once a month pursuant to 40 CFR §112.
9	Dust control	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.
10	Construction	Fencing: The wellsite will be fenced if requested by the Surface Owner.
11	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.
12	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.
13	Drilling/Completion Operations	Closed Loop System will be used for drilling and fluid management. No reserve pit will be used.
14	Drilling/Completion Operations	BOPE tests will be run upon initial rig-up and at least once every thirty (30) days during drilling operations. Pressure testing of the casing string and each component of the blowout prevention equipment, including flange connections, will be performed to seventy percent (70%) of working pressure or seventy percent (70%) of the internal yield of casing, whichever is less.
15	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.
16	Drilling/Completion Operations	Light Pollution: Lighting abatement measure will be implemented, including the installation lighting shield devices on all of the more conspicuous lights, low density sodium lighting where practicable; and rig shrouding is no believed necessary as this is an industrial area and the only building unit within 1,000' is owned by "Operator".
17	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.
18	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: 18 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
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

Att Doc Num	Name
400993941	FORM 2 SUBMITTED
400996974	DIRECTIONAL DATA
400996975	DEVIATED DRILLING PLAN
400997690	OffsetWellEvaluations Data
400997693	WASTE MANAGEMENT PLAN
401020899	EXCEPTION LOC REQUEST
401020906	SURFACE AGRMT/SURETY
401025891	WELL LOCATION PLAT

Total Attach: 8 Files

General Comments

User Group	Comment	Comment Date
Permit	Final Review Complete. Operator corrected mud program to NO, oil based muds will NOT be used. Now consistent with related Form 2A.	7/5/2016 11:22:13 AM
Permit	Per operator changed the Distance from completed portion of proposed wellbore to nearest completed portion of offset wellbore permitted or completed in the same formation from to 935' and the well measured to Marrs 28C-28HZ. Permitting Review Complete.	6/14/2016 7:45:54 AM
Permit	ON HOLD: requesting correction to Distance from completed portion of proposed wellbore to nearest completed portion of offset wellbore permitted or completed in the same formation.	3/2/2016 3:32:09 PM
Permit	Open Hole Logging BMP submitted by operator.	3/2/2016 3:32:08 PM
Engineer	Offset wells evaluated	5/13/2016 2:54:32 PM
Permit	Passed completeness.	4/26/2016 2:31:31 PM
Permit	Returned to draft: Distance to nearest building should be the same as distance to building unit. Top of cement missing on first string.	4/25/2016 10:24:42 AM
Permit	Returned to draft: Top of producing zone missing from plat.	4/12/2016 8:20:47 AM
Permit	Top of producing zone missing from plat.	4/6/2016 2:08:59 PM

Total: 9 comment(s)