

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:
03/24/2016

Well Name: Shook Well Number: 3-10-4NBH

Name of Operator: PETROSHARE CORPORATION COGCC Operator Number: 10454

Address: 7200 S ALTON WAY #B220

City: CENTENNIAL State: CO Zip: 80112

Contact Name: Kimberly Rodell Phone: (303)942-0506 Fax: ()

Email: krodell@upstreampm.com

RECLAMATION FINANCIAL ASSURANCE
Plugging and Abandonment Bond Surety ID: 20130019

WELL LOCATION INFORMATION

QtrQtr: NWSE Sec: 3 Twp: 1S Rng: 67W Meridian: 6

Latitude: 39.992220 Longitude: -104.873060

Footage at Surface: 2058 feet FNL/FSL FSL 2109 feet FEL/FWL FEL

Field Name: WATTENBERG Field Number: 90750

Ground Elevation: 5096 County: ADAMS

GPS Data:
Date of Measurement: 10/10/2015 PDOP Reading: 1.0 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

860 FSL 748 FEL 460 FSL 748 FEL

Sec: 3 Twp: 1S Rng: 67W Sec: 10 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: 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.)

T1S R67W Sec. 3: SWSE

Total Acres in Described Lease: 40 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: 1056 Feet
Building Unit: 987 Feet
High Occupancy Building Unit: 5280 Feet
Designated Outside Activity Area: 5280 Feet
Public Road: 1077 Feet
Above Ground Utility: 965 Feet
Railroad: 5280 Feet
Property Line: 272 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: 10/27/2015

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: 288 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

Unit Configuration: Section 3 T1S R67W: S2SE; Section 10 T1S R67W: E2

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	407-1611	400	See above

DRILLING PROGRAM

Proposed Total Measured Depth: 13800 Feet

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

0 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? 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	520	1500	0
1ST	8+3/4	5+1/2	17	0	13800	2385	13800	

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 the completed portion of the proposed wellbore to nearest wellbore permitted or completed in the same formation was measured to the proposed Shook 3-10-2NAH. The distance from the proposed wellbore to nearest existing or permitted wellbore belonging to another operator was taken from the Grenemyer 15N-3HZ, API No. 05-123-38418 owned by Kerr McGee Oil & Gas Onshore LP, and the Hi-Land 10-G, API No. 05-001-08768, and Hi-Land 10-B, API No. 05-001-08767 both owned by Tudex Petroleum Inc. The distance does not take into account vertical separation. The distance to the nearest lease line was marked as "0" as there are multiple leases in this Drilling and Spacing Unit which the wellbore will cross. The horizontal wellbore conforms to the Drilling and Spacing Unit and its setbacks. This location falls in both the Wattenberg and Spindle (77900) fields. Per a conversation with the Commission, the Footage At Top of Prod Zone was changed to the landing point.

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 No

I hereby certify all statements made in this form are, to the best of my knowledge, true, correct, and complete.

Signed: _____ Print Name: Kimberly Rodell

Title: Permit Agent Date: 3/24/2016 Email: krodell@upstreampm.com

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: _____

Expiration Date: _____

API NUMBER

05

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

COA Type	Description

Best Management Practices

No	BMP/COA Type	Description
1	Planning	Visual Mitigation: The location was placed to utilize a natural and existing tree line that will act as a visual barrier.
2	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 further of the guy line anchor.

3	General Housekeeping	Removal of Surface Trash: PetroShare 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.
4	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.
5	Material Handling and Spill Prevention	Berm Construction: 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.
6	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. Recorded inspections will be conducted once a month pursuant to 40 CFR §112.
7	Dust control	Fresh water, per COGCC rules, or another approved source may be applied to roads and land surfaces for purposes of dust mitigation. No other liquid or substance generated by the production of the oil and gas facility will be applied to the roads and land surfaces.
8	Construction	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. The location was selected due to an existing tree line that will act as a visual barrier.
9	Noise mitigation	PetroShare will abide by all COGCC noise standards for all activities. The location was placed to utilize a natural and existing tree line that will act as a noise barrier.
10	Emissions mitigation	Air Emissions: Air containment emission sources shall comply with the permit and control provisions of the state air quality control program and the rules and regulation promulgated by the State Air Quality Control. PetroShare will employ such control measures and operating procedures as are necessary to minimize fugitive particulate emissions into the atmosphere.
11	Odor mitigation	PetroShare 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.
12	Drilling/Completion Operations	Closed Loop System: A Closed Loop System will be used for drilling and fluid management. No reserve pit will be used.
13	Drilling/Completion Operations	Rig with Kelly: The BOP will include a minimum of double ram with blind ram pipe ram, annular preventer or a rotating head. At least one (1) person with training for blowout prevention will be on location during all drilling operations.
14	Drilling/Completion Operations	Control of Fire Hazards: PetroShare and its contractor's will 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. PetroShare will ensure that any flammable material will remain no less than 25 feet from the wellhead (s), tanks and separator(s).
15	Drilling/Completion Operations	Logging: 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	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.

17	Drilling/Completion Operations	BOPE Testing for Drilling Operations: BOPE tests will be done 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.
18	Drilling/Completion Operations	Lighting: 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.
19	Drilling/Completion Operations	Anti-Collision BMP: Anti-Collision: PetroShare 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.
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	Drill Stem Tests: Not applicable. No drill stem tests are planned.
22	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: 22 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>
401010034	FORM 2 SUBMITTED
401012733	OffsetWellEvaluations Data
401012739	SURFACE AGRMT/SURETY
401012740	WASTE MANAGEMENT PLAN
401012743	WELL LOCATION PLAT
401012744	EXCEPTION LOC WAIVERS
401012745	DIRECTIONAL DATA
401014584	OTHER
401014586	EXCEPTION LOC REQUEST
401014588	DEVIATED DRILLING PLAN

Total Attach: 10 Files

General Comments

<u>User Group</u>	<u>Comment</u>	<u>Comment Date</u>

Total: 0 comment(s)