

FORM
2

Rev
08/16

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:

401123836

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:

10/27/2016

Well Name: Riggs Well Number: 35-761-0763XBH
Name of Operator: CAERUS WASHCO LLC COGCC Operator Number: 86610
Address: 1001 17TH STREET - STE #1600
City: DENVER State: CO Zip: 80202
Contact Name: Reed Haddock Phone: (720)880-6369 Fax: (303)565-4606
Email: rhaddock@caerusoilandgas.com

RECLAMATION FINANCIAL ASSURANCE

Plugging and Abandonment Bond Surety ID: 20070099

WELL LOCATION INFORMATION

QtrQtr: SWSE Sec: 35 Twp: 7N Rng: 61W Meridian: 6

Latitude: 40.525018

Longitude: -104.172080

Footage at Surface: 250 Feet FNL/FSL FSL 1438 Feet FEL/FWL FEL

Field Name: WILDCAT Field Number: 99999

Ground Elevation: 4770 County: WELD

GPS Data:

Date of Measurement: 06/08/2016 PDOP Reading: 6.0 Instrument Operator's Name: James Kalmon

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
460 FNL 1293 FEL 460 FSL 1293 FEL
Sec: 2 Twp: 6N Rng: 61W Sec: 11 Twp: 6N Rng: 61W

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.)

Sec. 2, T6N-R61W - LOTS 1 (39.15), 2 (39.20), 3 (39.26), 4 (39.31), S2N2, S2

Sec. 11, T6N-R61W - ALL

Total Acres in Described Lease: 1277 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: 1332 Feet

Building Unit: 1379 Feet

High Occupancy Building Unit: 5280 Feet

Designated Outside Activity Area: 5280 Feet

Public Road: 235 Feet

Above Ground Utility: 210 Feet

Railroad: 5280 Feet

Property Line: 250 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: _____

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: 158 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. 2, 11, T6N-R61W

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	407-1747	1280	Sec. 2, 11 – All

DRILLING PROGRAM

Proposed Total Measured Depth: 16296 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: 643 Feet ☐ No well belonging to another operator within 1,500 feet

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: ONSITE Cuttings Disposal Method: Beneficial reuse

Other Disposal Description:

Surface and intermediate zone drill cuttings will be remediated and reused onsite. Production zone drill cuttings will be disposed offsite at a commercial disposal facility. See Waste Management Plan attached to Form 2A.

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
CONDUCTOR	30	20	52.8#	0	75	163	75	0
SURF	12+1/4	9+5/8	36#	0	1000	126	1000	0
1ST	8+3/4	7	26#	0	6722	568	6722	1000
1ST LINER	6+1/8	4+1/2	11.6#	5083	16296	590	16296	5083

☐ 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: Nearest offset operated producing/plugged well is operated by Vaughn Bros Oil Co, Harpring # 1-11 (API No. 05-123-10216).

The Frank Trust 11-11H will be plugged and abandoned prior to drilling any wells on this pad.

Surface Use Agreement has waivers for Rule 318A.a & 318A.c. Page 3, Section 12.

This application is in a Comprehensive Drilling Plan _____ 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: Reed Haddock

Title: Sr. Regulatory Specialist Date: 10/27/2016 Email: rhaddock@caerusoilandgas.co

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: 3/19/2017

Expiration Date: 03/18/2019

API NUMBER

05 123 44453 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>Provide offset well mitigation per the DJ Basin Horizontal Offset Policy for the following offset well(s) of concern: 05-123-05229, JUHL 1 05-123-05231, HANNA TAYLOR 1 05-123-05241, RYAN 1 05-123-05242, KIRCHOF 2 05-123-05244, RYAN 2 05-123-05245, KIRCHHOF 4 05-123-05250, KIRCHHOF 7 05-123-05253, KIRCHHOF 1 05-123-05259, BAUER 1 05-123-07051, KIRCHHOF 1 05-123-08519, JUHL 1 05-123-10216, HARPRING 1-11 Ensure all applicable documentation is submitted based on the selected mitigation option chosen, and submit Form 42(s) ("OFFSET MITIGATION COMPLETED") for the remediated well(s), referencing the API Number of the proposed horizontal well(s) stating what appropriate mitigation occurred and that it has been completed, prior to the hydraulic stimulation of this well.</p>
	<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) All: Within 60 days of rig release, prior to stimulation.2) Delayed completion: 6 months after rig release, prior to stimulation.3) All: 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) Provide cement coverage to a minimum of 200' above Niobrara and from 1500' to 50' above base of surface casing. Verify coverage with cement bond log. (Water wells within 2 miles developed in Upper Pierre zone visible on offset logs.)

Best Management Practices

<u>No</u>	<u>BMP/COA Type</u>	<u>Description</u>
1	Drilling/Completion Operations	Prior to drilling operations, Caerus Washco, LLC will perform an anti-collision scan of existing offset wells that have the potential of being within close proximity of the proposed well. This anti-collision scan will include definitive MWD or gyro surveys of the offset wells with included error of uncertainty per survey instrument, and compared against the proposed well path with its respective error of uncertainty. If current surveys do not exist for the offset wells, Operator may have gyro surveys conducted to verify ottom hole location. The proposed well will only be drilled if the anti-collision scan results indicate that there is not a risk for collision, or harm to people or the environment.
2	Drilling/Completion Operations	Caerus Operating LLC will follow COGCC Policy for Bradenhead Monitoring effective May 29, 2012.
3	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 to 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.

Total: 3 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

<u>Att Doc Num</u>	<u>Name</u>
401123836	FORM 2 SUBMITTED
401123840	WELL LOCATION PLAT
401124625	DEVIATED DRILLING PLAN
401124626	DIRECTIONAL DATA
401124627	SURFACE AGRMT/SURETY
401141735	OffsetWellEvaluations Data
401141736	EXCEPTION LOC REQUEST
401236634	OFFSET WELL EVALUATION

Total Attach: 8 Files

General Comments

<u>User Group</u>	<u>Comment</u>	<u>Comment Date</u>
Permit	Final Review Completed.	03/13/2017
Permit	Per operator added the correct Open Hole logging BMP. Changed the distances to Building & Building Unit. Added "Surface Use Agreement has waivers for Rule 318A.a & 318A.c. Page 3, Section 12" to operator comments. Open Hole Logging BMP submitted by operator. Permitting Review Complete.	03/13/2017
Engineer	Evaluated existing wells within 1500' of proposed directional.	02/06/2017
Permit	Per operator changed Drilling Fluids and Disposal Methods to Offsite and Commerical Disposal respectively. Added description comment from 2A.	01/27/2017
Permit	Passed completeness.	11/09/2016
Permit	Remove phrase "operationally feasible" from Rule 317.p statement in BMP/COA tab.	11/04/2016
Permit	Returned to Draft: <ul style="list-style-type: none">•In the Drilling & Waste Plans Tab, distance to nearest non-op well needs to be revised and a comment included on the Submit Tab which well is being measured to.•Need Operator's Wellbore Integrity Contact Email in the Offset Wells Evaluation Tab.•Add GWA Anti-Collision BMP to Operator BMP/COA Tab.	11/02/2016

Total: 7 comment(s)