

Additional explanation of local process:

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: applicant is owner

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. 14, T4S-R96W - All, and other lands.

Total Acres in Described Lease: 1890 Described Mineral Lease is: Fee State Federal Indian

Federal or State Lease # COC057684

Distance from Completed Portion of Wellbore to Nearest Lease Line of described lease: 2074 Feet

CULTURAL DISTANCE INFORMATION

Distance to nearest:

Building: 5280 Feet

Building Unit: 5280 Feet

High Occupancy Building Unit: 5280 Feet

Designated Outside Activity Area: 5280 Feet

Public Road: 5280 Feet

Above Ground Utility: 5280 Feet

Railroad: 5280 Feet

Property Line: 678 Feet

School Facility: 5280 Feet

School Property Line: 5280 Feet

Child Care Center: 5280 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, Designated Outside Activity Area, School Facility, and Child Care Center – 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 INFORMATIONDistance from completed portion of proposed wellbore to nearest completed portion of offset wellbore permitted or completed in the same formation: 265 FeetDistance from Completed Portion of Wellbore to Nearest Unit Boundary 3085 Feet (Enter 5280 for distance greater than 1 mile.)Federal or State Unit Name (if appl): Liberty Unit Unit Number: COC069926X**SPACING & FORMATIONS COMMENTS**

If this Form 2 is associated with a Drilling and Spacing Unit application, provide docket number: _____

OBJECTIVE FORMATIONS

Objective Formation(s)	Formation Code	Spacing Order Number(s)	Unit Acreage Assigned to Well	Unit Configuration (N/2, SE/4, etc.)
WILLIAMS FORK	WMFK	1-229		

DRILLING PROGRAMProposed Total Measured Depth: 12614 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: _____ Feet No well belonging to another operator within 1,500 feetWill a closed-loop drilling system be used? YesIs 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? NoWill salt based (>15,000 ppm Cl) drilling fluids be used? NoWill oil based drilling fluids be used? NoBOP Equipment Type: Annular Preventor Double Ram Rotating Head None**GROUNDWATER BASELINE SAMPLING AND MONITORING AND WATER WELL SAMPLING**Water well sampling required per Rule 609**DRILLING WASTE MANAGEMENT PROGRAM**Drilling Fluids Disposal: OFFSITE Drilling Fluids Disposal Methods: Recycle/reuseCuttings Disposal: ONSITE Cuttings Disposal Method: Other

Other Disposal Description:

The cuttings will be put through shakers to minimize moisture and analyzed for Table 910-1 constituents. Cuttings that meet 910-1 levels will be backfilled into the cuttings management area along the southeastern cut portion of the pad.

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	54#	0	100	218	100	0
SURF	14+3/4	9+5/8	36#	0	3000	994	3000	0
1ST	8+3/4	4+1/2	11.6#	0	12614	1639	12614	3000

 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

This application is in a Comprehensive Drilling Plan _____ CDP #: _____

Location ID: 467272

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: Reed Haddock

Title: Sr. Regulatory Specialist Date: 8/19/2019 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, applicable orders, and SB 19-181 and is hereby approved.

COGCC Approved:  _____ Director of COGCC Date: 9/14/2019

Expiration Date: 09/13/2021

API NUMBER
05 103 12369 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>
Drilling/Completion Operations	<p>1) Operator shall comply with the most current revision of the Northwest Notification Policy.</p> <p>2) Operator shall provide cement coverage from the production casing shoe (4+1/2" FIRST STRING) to a minimum of 200' above all Mesaverde Group (and Ohio Creek Formation, if present) oil, gas, and water-bearing sandstone and coalbed formations. Verify production casing cement coverage with a cement bond log.</p> <p>3) During stimulation, operator shall monitor the bradenhead, casing, and tubing pressure of the proposed well and all offset wells under Operator's control which penetrate the stimulated formation and have a treated interval separation of 300 feet or less. Operator shall notify COGCC Engineering staff if bradenhead pressures increase by more than 200 psig.</p>

Best Management Practices

<u>No</u>	<u>BMP/COA Type</u>	<u>Description</u>
1	Planning	Alternative Logging Program: One of the first wells drilled on the pad will be logged with open-hole resistivity log with gamma-ray log from TD 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 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 will state "Alternative Logging Program - No open-hole logs were run" and will clearly identify the type of log and the well (by API#) in which open-hole logs were run.
2	Drilling/Completion Operations	Closed loop system will be used. No pits will be built. Caerus will ensure 110 percent secondary containment for any potential volume of fluids that may be released.

Total: 2 comment(s)

Applicable Policies and Notices to Operators

NW Colorado Notification Policy.
http://cogcc.state.co.us/documents/reg/Policies/nw_notification_procedures.pdf

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>
401973811	FORM 2 RESUBMITTED
402148037	FORM 2 REJECTED
402149657	WELL LOCATION PLAT
402149658	FED. DRILLING PERMIT
402149660	DEVIATED DRILLING PLAN
402149661	DIRECTIONAL DATA
402149664	LEGAL/LEASE DESCRIPTION

Total Attach: 7 Files

General Comments

<u>User Group</u>	<u>Comment</u>	<u>Comment Date</u>
Permit	Final Review Completed.	09/12/2019
Permit	-Logging BMP corrected to most current language. -Cuttings disposal method corrected to reflect the 2A and description added.	09/09/2019
Permit	The Director Objective Criteria Review Summary (Doc#2108936) is attached to this Form 2 Application for Permit to Drill (APD). Following additional analysis of the Director Objective Criteria, the Director determined that this application meets the standard for the protection of public health, safety, welfare, the environment and wildlife resources set by SB 19-181.	09/09/2019
Permit	Passed Completeness.	08/20/2019
Permit (Rejected)	REJECTION: This APD has been rejected per the COGCC Rejection Process (updated May 21, 2019). Other APDs on the same pad had "The right to construct is incorrect and the distance to nearest lease line is incorrect. This APD has not been reviewed.	08/18/2019
Engineer	Offset water well check: COGCC evaluated offset water wells within one mile of this proposed well's surface hole location. This information in addition to locally-available geophysical logs and hydrogeologic information was used to evaluate the adequacy of the operator's proposed surface casing setting depth. The deepest water well within one mile is 75 feet. None of the water wells within one mile are for domestic use. Offset Well Evaluation: There are no existing offset oil and gas wells within 1,500 feet of this wellbore.	06/20/2019
Permit	Passed completeness.	06/17/2019

Total: 7 comment(s)