

FORM
2

Rev
12/20

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:

402580786

Date Received:

02/02/2021

APPLICATION FOR PERMIT TO:

☒ Drill ☐ Deepen ☐ Re-enter ☐ Recomplete and Operate

Amend ☐

TYPE OF WELL OIL ☐ GAS ☒ COALBED ☐ OTHER: _____

Refill ☐

ZONE TYPE SINGLE ZONE ☒ MULTIPLE ZONES ☐ COMMINGLE ZONES ☐

Sidetrack ☐

| | |
|---------------------------------------|------------------------------|
| Well Name: ELU O13 FED | Well Number: 13A-13-496 |
| Name of Operator: CAERUS PICEANCE LLC | COGCC Operator Number: 10456 |
| Address: 1001 17TH STREET #1600 | |
| City: DENVER | State: CO |
| Zip: 80202 | |
| Contact Name: Reed Haddock | Phone: (720)880-6369 |
| Email: rhaddock@caerusoilandgas.com | Fax: (303)565-4606 |

RECLAMATION FINANCIAL ASSURANCE

Plugging and Abandonment Bond Surety ID: 20130021

WELL LOCATION INFORMATION

Surface Location

QtrQtr: SWSE Sec: 13 Twp: 4S Rng: 96W Meridian: 6
Footage at Surface: 1285 Feet FSL 2232 Feet FEL
Latitude: 39.698676 Longitude: -108.115597
GPS Data: GPS Quality Value: 1.4 Type of GPS Quality Value: PDOP Date of Measurement: 05/18/2020
Ground Elevation: 8119
Field Name: GRAND VALLEY Field Number: 31290

Well Plan: is ☒ Directional ☐ Horizontal (highly deviated) ☐ Vertical

If Well plan is Directional or Horizontal attach Deviated Drilling Plan and Directional Data.

Subsurface Locations

Top of Productive Zone (TPZ)

Sec: 13 Twp: 4S Rng: 96W Footage at TPZ: 2250 FNL 1370 FWL
Measured Depth of TPZ: 8930 True Vertical Depth of TPZ: 8560 FNL/FSL FEL/FWL

Base of Productive Zone (BPZ)

Sec: 13 Twp: 4S Rng: 96W Footage at TPZ: 2285 FNL 1276 FWL
Measured Depth of TPZ: 12800 True Vertical Depth of TPZ: 12429 FNL/FSL FEL/FWL

Bottom Hole Location (BHL)

Sec: 13 Twp: 4S Rng: 96W Footage at BHL: 2285 FNL 1276 FWL
FNL/FSL FEL/FWL

LOCAL GOVERNMENT PERMITTING INFORMATION

County: RIO BLANCO Municipality: N/A

Is the Surface Location of this Well in an area designated as one of State interest and subject to the requirements of § 24-65.1-108 C.R.S.? No

Per § 34-60-106(1)(f)(I)(A) C.R.S., the following questions pertain to the Relevant Local Government approval of the siting of the proposed Oil and Gas Location.

SB 19-181 provides that when "applying for a permit to drill," operators must include proof that they sought a local government siting permit and the disposition of that permit application, or that the local government does not have siting regulations. § 34-60-106(1)(f)(I)(A) C.R.S.

Does the Relevant Local Government regulate the siting of Oil and Gas Locations, with respect to this Location? ☐ Yes ☒ No

☐ If yes, in checking this box, I hereby certify that an application has been filed with the local government with jurisdiction to approve the siting of the proposed oil and gas location.

The disposition of the application filed with the Relevant Local Government is: _____ Date of Final Disposition: _____

Comments: Caerus Piceance LLC contacted Rio Blanco County and they have no siting regulations. Rio Blanco County has waived its right to precede the COGCC in siting determination. Contact Lanney Massey, Rio Blanco LGD and NRS at 970-878-9586 for questions.

SURFACE AND MINERAL OWNERSHIP AT WELL'S OIL & GAS LOCATION

Surface Owner of the land at this Well's Oil and Gas Location: ☒ Fee ☐ State ☐ Federal ☐ Indian

Mineral Owner beneath this Well's Oil and Gas Location: ☐ Fee ☐ State ☒ Federal ☐ Indian

Surface Owner Protection Financial Assurance (if applicable): _____ Surety ID Number (if applicable): _____

MINERALS DEVELOPED BY WELL

The ownership of all the minerals that will be developed by this Well is (check all that apply):

- ☐ Fee
☐ State
☒ Federal
☐ Indian
☐ N/A

LEASE INFORMATION

Using standard QtrQtr, Section, Township, Range format describe one entire mineral lease as follows:

* If this Well is within a unit, describe a lease that will be developed by the Well.

* If this Well is not subject to a unit, describe the lease that will be produced by the Well.

(Attach a Lease Map or Lease Description or Lease if necessary.)

Sec. 13-T4S-96W - Lots 1-4, S2N2, NWSW, S2SW, SE and other lands.

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

Federal or State Lease # COC057684

SAFETY SETBACK INFORMATION

Distance from Well to nearest:

Building: 365 Feet
Building Unit: 5280 Feet
Public Road: 431 Feet
Above Ground Utility: 5280 Feet

INSTRUCTIONS:

- Specify all distances per Rule 308.b.(1).
- 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 – as defined in 100 Series Rules.

Railroad: 5280 Feet
Property Line: 1285 Feet

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 | | |

Federal or State Unit Name (if appl): Ex Liberty Unit

Unit Number: COC069926X

SUBSURFACE MINERAL SETBACKS

Enter 5280 for distance greater than 1 mile.

Is this Well within a unit? Yes

If YES:

Enter the minimum distance from the Completed Zone of this Well to the Unit Boundary: 2905 Feet

Enter the minimum distance from the Completed Zone of this Well to the Completed Zone of an offset Well within the same unit permitted or completed in the same formation: 260 Feet

If NO:

Enter the minimum distance from the Completed Zone of this Well to the Lease Line of the described lease: Feet

Enter the minimum distance from the Completed Zone of this Well to the Completed Zone of an offset Well producing from the same lease and permitted or completed in the same formation: Feet

Exception Location

☐ If this Well requires the approval of a Rule 401.c Exception Location, enter the Rule or spacing order number and attach the Exception Location Request and Waivers.

SPACING & FORMATIONS COMMENTS

DRILLING PROGRAM

Proposed Total Measured Depth: 13047 Feet

TVD at Proposed Total Measured Depth 12676 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 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 Plan unless a plan was already submitted with the Form 2A per Rule 304.c.(10).

Will there be hydraulic fracture treatment at a depth less than 2,000 feet in this well? No

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

Beneficial reuse or land application plan submitted?

Reuse Facility ID: or Document Number:

| <u>Casing Type</u> | <u>Size of Hole</u> | <u>Size of Casing</u> | <u>Grade</u> | <u>Wt/Ft</u> | <u>Csg/Liner Top</u> | <u>Setting Depth</u> | <u>Sacks Cmt</u> | <u>Cmt Btm</u> | <u>Cmt Top</u> |
|--------------------|---------------------|-----------------------|--------------|--------------|----------------------|----------------------|------------------|----------------|----------------|
| CONDUCTOR | 30 | 20 | A252 | 54# | 0 | 100 | 218 | 100 | 0 |
| SURF | 14+3/4 | 9+5/8 | J55 | 36# | 0 | 3000 | 710 | 3000 | 0 |
| 1ST | 8+3/4 | 4+1/2 | HCP110 | 11.6# | 0 | 13047 | 1221 | 13047 | 4200 |

POTENTIAL FLOW AND CONFINING FORMATIONS

| <u>Zone Type</u> | <u>Formation /Hazard</u> | <u>Top M.D.</u> | <u>Top T.V.D.</u> | <u>Bottom M.D.</u> | <u>Bottom T.V.D.</u> | <u>TDS (mg/L)</u> | <u>Data Source</u> | <u>Comment</u> |
|------------------|--------------------------|-----------------|-------------------|--------------------|----------------------|-------------------|-----------------------|----------------|
| Groundwater | Green River | 0 | 0 | 1900 | 1842 | 501-1000 | CGS | |
| Confining Layer | Wasatch | 4182 | 4017 | 6700 | 6417 | | | |
| Hydrocarbon | Wasatch G | 6700 | 6417 | 7000 | 6703 | | | |
| Confining Layer | Ft. Union | 7015 | 6717 | 8300 | 7942 | | | |
| Hydrocarbon | Ohio Creek | 8930 | 8560 | 9500 | 9130 | >10000 | Produced Water Sample | |
| Hydrocarbon | Williams Fork | 9513 | 9143 | 12300 | 11929 | >10000 | Produced Water Sample | |
| Hydrocarbon | Cameo | 12347 | 11976 | 12800 | 12429 | >10000 | Produced Water Sample | |
| Hydrocarbon | Rollins | 12847 | 12476 | 13000 | 12629 | >10000 | Produced Water Sample | |

| | |
|----------|---|
| Comments | Caerus Piceance LLC plans to drill 26 wells on pad. The attached Federal APD is confidential. |
|----------|---|

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: Regulatory Lead Date: 2/2/2021 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: 3/8/2021

Expiration Date: 03/07/2024

API NUMBER

05 103 12510 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, ELU A24 FED 14D-13 496 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: The first well drilled on the pad will be logged with openhole 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. |
| 2 | Planning | The associated well pad Location ID: 479185 was approved on January 11, 2021 by the COGCC. The BLM White River Field Office (WRFO) approved the Application for Permit to Drill (APD) for this well on December 2, 2020 under the land use planning review of the WRFO Record of Decision and Approved Resource Management Plan (ROD/RMP), as amended by the WRFO Oil and Gas Development Plan Approved Resource Management Plan Amendment and the Northwest Colorado Greater Sage-Grouse Approved RMPA. Please reference the attached WRFO Environmental Assessment from November 2020 and the Decision Record approved by the WRFO BLM on November 25, 2020, which specifically addresses the criteria in which the associated well pad was evaluated and approved. |
| 3 | 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: 3 comment(s)

Applicable Policies and Notices to Operators

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

Attachment List

| <u>Att Doc Num</u> | <u>Name</u> |
|--------------------|-------------------------|
| 402580786 | APD APPROVED |
| 402580794 | WELL LOCATION PLAT |
| 402580797 | DEVIATED DRILLING PLAN |
| 402580798 | DIRECTIONAL DATA |
| 402580829 | FED. DRILLING PERMIT |
| 402580830 | SURFACE AGRMT/SURETY |
| 402580833 | LEGAL/LEASE DESCRIPTION |
| 402588709 | OTHER |
| 402622068 | FORM 2 SUBMITTED |
| 402622108 | PUBLIC COMMENT-0 |

Total Attach: 10 Files

General Comments

| <u>User Group</u> | <u>Comment</u> | <u>Comment Date</u> |
|-------------------|--|---------------------|
| Engineer | <p>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. None of the water wells within one mile are for domestic use.</p> <p>Offset Well Evaluation: Existing offset oil and gas wells within 1,500 feet of this wellbore meet standards. No mitigation required.</p> | 03/04/2021 |
| Permit | Final Review Completed. | 03/02/2021 |
| OGLA | <p>This Location and its associated Form 2A materials was fully reviewed during the OGLA review of this APD in accordance with current Rules. See Form 4 #402605154 (email from CPW indicating that a full assessment of potential indirect wildlife resources impacts for the ELU O13-496 well pad along with the ELU M12-496 and ELU A18-496 well pads during the Oil and Gas Development Plan [OGDP] and Form 2A review processes) in the ELU O13-496 Pad Location ID #479185 file for additional information. This APD complies with all COGCC Rules and is adequately protective of public health, safety, welfare, the environment, and wildlife resources.</p> <p>Passed the OGLA task.</p> | 02/24/2021 |
| Permit | Permit review complete | 02/22/2021 |

Total: 4 comment(s)