

FORM

2

Rev  
05/22

## 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:

403104404

Date Received:

01/09/2023

## APPLICATION FOR PERMIT TO

☒ Drill
 ☐ Deepen
 ☐ Re-enter
 ☐ Recomplete and Operate
Amend ☒
 TYPE OF WELL OIL ☐ GAS ☒ COALBED ☐ OTHER: \_\_\_\_\_
Refile ☐
 ZONE TYPE SINGLE ZONE ☒ MULTIPLE ZONES ☐ COMMINGLE ZONES ☐
Sidetrack ☐

Well Name: ELU O13 FED

Well Number: 21A-24-496

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

Fax: (303)565-4606

Email: rhaddock@caerusoilandgas.com

## FINANCIAL ASSURANCE FOR PLUGGING, ABANDONMENT, AND RECLAMATION

## COGCC Financial Assurance

☐ The Operator has provided or will provide Financial Assurance to the COGCC for this Well.

Surety ID Number (if applicable): \_\_\_\_\_

## Federal Financial Assurance

☒ In checking this box, the Operator certifies that it has provided or will provide at least this amount of Financial Assurance to the federal government for this Well. (Per Rule702.a.)

Amount of Federal Financial Assurance \$ 6883

## WELL LOCATION INFORMATION

## Surface Location

QtrQtr: SWSE Sec: 13 Twp: 4S Rng: 96W Meridian: 6

Footage at Surface: 1281 Feet FSL 2284 Feet FEL

Latitude: 39.698668 Longitude: -108.115780

GPS Data: GPS Quality Value: 1.6 Type of GPS Quality Value: PDOP

Date of Measurement: 11/21/2022

Ground Elevation: 8120

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: 24 Twp: 4S Rng: 96W

Footage at TPZ: 262 FNL 667 FEL

Measured Depth of TPZ: 8937

True Vertical Depth of TPZ: 8619 FNL/FSL FEL/FWL

**Base of Productive Zone (BPZ)**Sec: 24 Twp: 4S Rng: 96WFootage at BPZ: 297 FNL 761 FELMeasured Depth of BPZ: 12600True Vertical Depth of BPZ: 12281 FNL/FSL FEL/FWL**Bottom Hole Location (BHL)**Sec: 24 Twp: 4S Rng: 96WFootage at BHL: 297 FNL 761 FELFNL/FSLFEL/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 Edward Smercina, 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 ☐ IndianMineral Owner beneath this Well's Oil and Gas Location: ☐ Fee ☐ State ☒ Federal ☐ Indian

Surface Owner Protection Bond (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. 24, T4S-96W - Lots 1 - 4, S2N2 and other lands.

Total Acres in Described Lease: 2425

Described Mineral Lease is: ☐ Fee

☐ State

☒ Federal

☐ Indian

Federal or State Lease # COC064814

## SAFETY SETBACK INFORMATION

Distance from Well to nearest:

Building: 369 Feet

Building Unit: 5280 Feet

Public Road: 513 Feet

Above Ground Utility: 5280 Feet

Railroad: 5280 Feet

Property Line: 1281 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.

## 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): Big Jimmy

Unit Number: COC074105X

## 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: 262 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: 275 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: 13200 Feet

TVD at Proposed Total Measured Depth 12881 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 H<sub>2</sub>S gas reasonably expected to be encountered during drilling operations at concentrations greater than or equal to 100 ppm? No If yes, attach an H<sub>2</sub>S 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: \_\_\_\_\_

## CASING PROGRAM

| Casing Type | Size of Hole | Size of Casing | Grade  | Wt/Ft      | Csg/Liner Top | Setting Depth | Sacks Cmt | Cmt Btm | Cmt Top |
|-------------|--------------|----------------|--------|------------|---------------|---------------|-----------|---------|---------|
| CONDUCTOR   | 30           | 20             | A252   | 54#        | 0             | 100           | 218       | 100     | 0       |
| SURF        | 14+3/4       | 9+5/8          | J55    | 36#        | 0             | 3400          | 800       | 3400    | 1400    |
| 1ST         | 8+3/4        | 4+1/2          | HCP110 | 11.6#      | 0             | 13200         | 1429      | 13200   | 4200    |
|             |              | 9+5/8          |        | Stage Tool |               | 1400          | 312       | 1400    | 0       |

☐ Conductor Casing is NOT planned

## POTENTIAL FLOW AND CONFINING FORMATIONS

| Zone Type       | Formation /Hazard | Top M.D. | Top T.V.D. | Bottom M.D. | Bottom T.V.D. | TDS (mg/L) | Data Source           | Comment   |
|-----------------|-------------------|----------|------------|-------------|---------------|------------|-----------------------|---|
| Groundwater     | Green River       | 0        | 0          | 4000        | 3871          | 501-1000   | CGS                   |   |
| Confining Layer | Wasatch           | 4088     | 3955       | 6591        | 6355          |            |                       |   |
| Hydrocarbon     | Wasatch G         | 6591     | 6355       | 6904        | 6655          |            |                       | The Wasatch G zone is non-productive in the referenced area of the basin. |
| Confining Layer | Fort Union        | 6904     | 6655       | 8937        | 8619          |            |                       |   |
| Hydrocarbon     | Ohio Creek        | 8937     | 8619       | 9439        | 9121          | >10000     | Produced Water Sample |   |
| Hydrocarbon     | Williams Fork     | 9439     | 9121       | 12386       | 12067         | >10000     | Produced Water Sample |   |
| Hydrocarbon     | Cameo             | 12386    | 12067      | 12670       | 12381         | >10000     | Produced Water Sample |   |
| Hydrocarbon     | Rollins           | 12670    | 12381      | 13200       | 12881         | >10000     | Produced Water Sample |   |

## OPERATOR COMMENTS AND SUBMITTAL

Comments: The ELU O13-496 Pad is a built pad with a valid Form 2A that expires January 10, 2024. The previously submitted directional plans, location survey plats, and casing design have changed. The Operator, Caerus Piceance LLC is the landowner.

This application is in a Comprehensive Area Plan \_\_\_\_\_ CAP #: \_\_\_\_\_

Oil and Gas Development Plan Name \_\_\_\_\_ OGDID ID#: \_\_\_\_\_

Location ID: 479185

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: 1/9/2023

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: 2/22/2023

Expiration Date: 02/21/2026

**API NUMBER**

05 103 12522 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.**

#### **COA Type**

#### **Description**

|                                |   |
|--------------------------------|---|
| 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> |
| 1 COA                          |   |

## Best Management Practices

| No BMP/COA Type                  | Description   |
|----------------------------------|---|
| 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 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 1, 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 | <p>Closed loop system will be used.</p> <p>DRILL CUTTINGS: The moisture content of all drill cuttings managed onsite shall be kept as low as practicable to prevent accumulation of liquids greater than de minimis amounts. All cuttings generated during drilling will be placed in a bermed portion of the well pad prior to onsite beneficial reuse.</p> <p>Drill cuttings will be put through shakers to minimize moisture and analyzed for Table 915-1 constituents. Cuttings that meet 915-1 levels will be backfilled into the cuttings management area along the northwestern portion of the pad.</p> <p>CONTAINMENT: During drilling activities, Caerus utilizes a portable containment liner under the substructure of the drilling rig during drilling activities to protect shallow groundwater from any potential spills surrounding the rig during drilling. A liquid release would simply be vacuumed up from the liner. When drilling activity is completed, the liner is removed and transferred to the next drilling location. For permanent containment at the oil and gas location Caerus will ensure 150% secondary containment of volume in the single largest tank on the oil and gas location in compliance with Rule 603.o. During completions, Caerus may utilize 15-20 temporary tanks to hold frac fluid and flowback water. Tanks would be housed in a compacted earthen bermed area and secondary containment.</p> <p>FLOWBACK &amp; STIMULATION: The ELU G13 496 CDP Pad will serve flowback operations, consisting of separating equipment, generators, coolers and pumps. Gas separated during flowback operations will discharge flowback equipment and flow through the gas meter located at the ELU G13 496 CDP so that proper metering and allocation can occur. The liners will be sufficient to hold up to 150% of the largest tank on the location. Note, the entire Oil and Gas Location for the ELU O13-496 will include a compacted earthen berm perimeter around the operational area for ELU O13-496 Well Pad. Once the working tanks are no longer necessary for operations both the tanks and the impervious liner will be removed.</p> |

Total: 3 comment(s)

## Attachment List

| Att Doc Num | Name                       |
|-------------|----------------------------|
| 403104404   | FORM 2 SUBMITTED           |
| 403232110   | DEVIATED DRILLING PLAN     |
| 403243144   | WELL LOCATION PLAT         |
| 403243785   | DIRECTIONAL DATA           |
| 403246118   | OffsetWellEvaluations Data |

Total Attach: 6 Files

**General Comments**

| <b><u>User Group</u></b> | <b><u>Comment</u></b>  | <b><u>Comment Date</u></b> |
|--------------------------|--|----------------------------|
| Permit                   | Final Review Completed.  | 02/13/2023                 |
| Permit                   | -Corrected distance to nearest unit boundary from 146 to 262.<br>-Correction made with operator concurrence  | 02/07/2023                 |
| OGLA                     | This Location (ID #479185) and its associated Form 2A materials were fully reviewed during the OGLA review of this APD in accordance with current Rules. This APD complies with all COGCC Rules and is adequately protective of public health, safety, welfare, the environment, and wildlife resources.   | 01/27/2023                 |
| 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> <p>4 offset Wasatch injection wells are within 1 mile of this pad. These wells are adequately isolated. The injection wells are not within the 1500 ft offset review buffer or the ¼ or ½ mile review buffer.</p> <p>Offset well Fed 13D-13-496 was remediated with cement and a casing patch. Cement coverage confirmed with CBL 402307466.</p> <p>Adjusted stage tool cement casing table nomenclature</p> | 01/17/2023                 |

Total: 4 comment(s)