

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:

402601668

Date Received:

01/30/2023

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 A18 FED

Well Number: 21A-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

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 \$ 10274

WELL LOCATION INFORMATION

Surface Location

QtrQtr: 3 Sec: 18 Twp: 4S Rng: 95W Meridian: 6

Footage at Surface: 267 Feet FNL/FSL 917 Feet FEL/FWL

Latitude: 39.708936 Longitude: -108.104411

GPS Data: GPS Quality Value: 1.4 Type of GPS Quality Value: PDOP

Date of Measurement: 05/06/2022

Ground Elevation: 8033

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: 152 FNL 1249 FEL

Measured Depth of TPZ: 8928

True Vertical Depth of TPZ: 8644 FNL/FSL FEL/FWL

Base of Productive Zone (BPZ)Sec: 13 Twp: 4S Rng: 96WFootage at BPZ: 186 FNL 1343 FELMeasured Depth of BPZ: 13100True Vertical Depth of BPZ: 12815 FNL/FSL FEL/FWL**Bottom Hole Location (BHL)**Sec: 13 Twp: 4S Rng: 96WFootage at BHL: 186 FNL 1343 FELFNL/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: Waived 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 LOCATIONSurface 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. 13, T4S-96W - Lots 1 thru 4 and other land.

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: 4488 Feet

Building Unit: 5280 Feet

Public Road: 3172 Feet

Above Ground Utility: 5280 Feet

Railroad: 5280 Feet

Property Line: 4372 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): 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: 5119 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: 265 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: 13608 Feet

TVD at Proposed Total Measured Depth 13323 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: _____

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	3500	822	3500	1400
1ST	8+3/4	4+1/2	HCP110	11.6#	0	13608	1489	13608	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	1900	1851	501-1000	CGS	
Confining Layer	Wasatch	2884	2800	6600	6386			
Hydrocarbon	Wasatch G	6693	6475	7000	6772			The Wasatch G is a non-productive zone in the referenced area of the basin.
Confining Layer	Ft. Union	7004	6775	8900	8616			
Hydrocarbon	Ohio Creek	8928	8644	9500	9217	>10000	Produced Water Sample	
Hydrocarbon	Williams Fork	9506	9222	12500	12215	>10000	Produced Water Sample	
Hydrocarbon	Cameo	12558	12273	13100	12815	>10000	Produced Water Sample	
Hydrocarbon	Rollins	13108	12823	13608	13323	>10000	Produced Water Sample	

OPERATOR COMMENTS AND SUBMITTAL

Comments Caerus Piceance LLC plans to drill 35 wells on pad. The attached Federal APD is confidential.

This application is in a Comprehensive Area Plan _____ CAP #: _____

Oil and Gas Development Plan Name ELU A18-495 OGDID #: 482776

Location ID: 483521

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: 1/30/2023

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: 3/21/2023

Expiration Date: 12/13/2025

API NUMBER

05 103 12635 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	1)Operator shall comply with the most current revision of the Northwest Notification Policy. 2) 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.
--------------------------------	---

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 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	<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 & STIMULATION: As wells progress from the drilling stage to the completions stage temporary working tanks will be situated on the ELU A18-495 Well Pad. Caerus estimates that there could be 15-20 500-bbl tanks on location for roughly 18-months as the wells progress from the drilling to completions stage during Sim-Ops. The contents of the tanks will contain produced water. The temporary tanks will be placed on a certain portion of the ELU A18-495 Well Pad and laid upon an impervious synthetic or engineered liner which would be underlaid by road base. 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 A18-495 will include a compacted earthen berm perimeter around the operational area for ELU A18-495 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
402601668	FORM 2 SUBMITTED
402601673	SURFACE AGRMT/SURETY
402601674	OTHER
402601690	FED. DRILLING PERMIT

402601692	LEGAL/LEASE DESCRIPTION
403061410	DEVIATED DRILLING PLAN
403061412	DIRECTIONAL DATA
403061559	WELL LOCATION PLAT

Total Attach: 8 Files

General Comments

<u>User Group</u>	<u>Comment</u>	<u>Comment Date</u>
Permit	Final Review Completed.	03/17/2023
Permit	Permit review complete	03/13/2023
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: There are no existing offset oil and gas wells within 1,500 feet of this wellbore.</p> <p>Adjusted stage tool cement casing table cement intervals</p>	02/22/2023
OGLA	The Commission approved OGDG #482776 on December 14, 2022 for the Oil and Gas Location related to this Form 2. OGLA task passed.	01/31/2023

Total: 4 comment(s)