

FORM  
2

Rev  
08/13

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:

400845773

Date Received:

06/10/2015

APPLICATION FOR PERMIT TO:

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

TYPE OF WELL OIL ☐ GAS ☐ COALBED ☐ OTHER Injection

Refilling ☐

ZONE TYPE SINGLE ZONE ☒ MULTIPLE ZONES ☐ COMMINGLE ZONES ☐

Sidetrack ☐

Well Name: Puckett SWD

Well Number: N6-796

Name of Operator: CAERUS PICEANCE LLC

COGCC Operator Number: 10456

Address: 600 17TH STREET #1600N

City: DENVER State: CO Zip: 80202

Contact Name: Reed Haddock

Phone: (720)880-6369

Fax: ( )

Email: rhaddock@caerusoilandgas.com

RECLAMATION FINANCIAL ASSURANCE

Plugging and Abandonment Bond Surety ID: 20130021

WELL LOCATION INFORMATION

QtrQtr: SESW Sec: 6 Twp: 7S Rng: 96W Meridian: 6

Latitude: 39.460264

Longitude: -108.152556

Footage at Surface: 447 feet FNL/FSL FSL 1874 feet FEL/FWL FWL

Field Name: GRAND VALLEY

Field Number: 31290

Ground Elevation: 8231

County: GARFIELD

GPS Data:

Date of Measurement: 09/18/2014 PDOP Reading: 1.3 Instrument Operator's Name: Harold Marshall

If well is ☒ Directional ☐ Horizontal (highly deviated) **submit deviated drilling plan.**

Footage at Top of Prod Zone: FNL/FSL 434 FSL 2271 FWL 434 FSL 2271 FWL

Sec: 6 Twp: 7S Rng: 96W Sec: 6 Twp: 7S Rng: 96W

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.)

The E/2 and SW/4 of Sec 6, T7S, R96W and the N/2 and the N/2S/2 of Sec 12, T7S, R96W and other lands. Please see attached mineral lease map.

Total Acres in Described Lease: 5141 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: 2032 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: 2147 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 Wellbore to Nearest Wellbore Permitted or Completed in the same formation: 5280 Feet

Distance from Completed Portion of Wellbore to Nearest Unit Boundary \_\_\_\_\_ Feet (Enter 5280 for distance greater than 1 mile.)

Federal or State Unit Name (if appl): \_\_\_\_\_ Unit Number: \_\_\_\_\_

## SPACING & FORMATIONS COMMENTS

Caerus proposes to inject into the Ohio Creek formation.

## OBJECTIVE FORMATIONS

Objective Formation(s)	Formation Code	Spacing Order Number(s)	Unit Acreage Assigned to Well	Unit Configuration (N/2, SE/4, etc.)
OHIO CREEK	OHCRK	Unspaced		

## DRILLING PROGRAM

Proposed Total Measured Depth: 6266 Feet

Distance to nearest permitted or existing wellbore penetrating objective formation: 330 Feet (Including plugged wells)

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 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 609

## DRILLING WASTE MANAGEMENT PROGRAM

Drilling Fluids Disposal: OFFSITE Drilling Fluids Disposal Methods: Recycle/reuse

Cuttings Disposal: ONSITE Cuttings Disposal Method: Other

Other Disposal Description:

Please refer to the Drilling and Waste Management Plan submitted with the Form 2A Location Assessment (Doc # 400845428).

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	16	42	0	100	218	100	0
SURF	14+3/4	9+5/8	36	0	2500	583	2500	0
1ST	8+3/4	5+1/2	17	0	6266	648	6266	1500

☐ 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 subject well is a proposed Class II, vertical disposal well. Caerus Piceance LLC proposes to inject into the Ohio Creek formation. Distance to nearest well penetrating objective formation was measured to the proposed Puckett 24D-6. The distance to lease line was measured from the BHL to the north of the Puckett 5,141 acre lease. Please see the BMPs attached to the Form 2A Location Assessment for this well pad (Doc # 400845428).

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: Regulatory Analyst Date: 6/10/2015 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: Matthew Lee Director of COGCC Date: 8/23/2015

Expiration Date: 08/22/2017

API NUMBER

05 045 22958 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>1. Injection is not authorized until approval of Forms 31 and 33.</p> <p>2. Operator required to contact COGCC to discuss Step Rate Test or Injectivity Test criteria for Maximum Surface Injection Pressure determination.</p> <p>3. Prior approval of Form 4 is required for step rate and injectivity tests.</p> <p>4. Retrieve water sample(s) from injection zone(s) before stimulating formation. Samples must be analyzed for Total Dissolved Solids at a minimum.</p> <p>5. For all new drill Underground Injection Control wells a suite of open-hole Resistivity/Gamma Ray and Density/Neutron logs is required from Surface Casing shoe to TD. A PDF, TIFF, or PDS visual image and a LAS or DILS file version of each log is required.</p> <p>6. For all new and converted Underground Injection Control wells a Cement Bond Log (CBL) is required on the cased portions of the hole from the bottom of the casing to the top of the next shallower casing string for all casing strings other than the Surface Casing. Only a PDF, TIFF, or PDS visual image is required, LAS format is appreciated-not required.</p> <p>7. Operator must provide all tops of formations encountered from surface to TD on the Form 5 when submitted.</p>
	<p>1) Operator shall comply with the most current revision of the Northwest Colorado Notification Policy. See attached notice.</p> <p>2) Operator shall comply with the most current revision of the Garfield County Rulison Field Notice to Operators, with the following exception: all field notice requirements specified in this notice to operators are superseded by the requirements of the most current revision of the Northwest Colorado Notification Policy (see condition of approval #1). See attached notice.</p> <p>3) Operator shall provide cement coverage from the production casing shoe (4+1/2" FIRST STRING) to a minimum of 200' above all Mesa Verde 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>4) Comply with all provisions of the June 12, 2008 Notice to Operators drilling wells within 3/4 mile of the rim of the Roan Plateau in Garfield County – Pit Design, Construction and Monitoring Requirements. See attached notice.</p> <p>5) The nearby hillside(s) must be monitored for any daylighting drilling fluids throughout the drilling of the surface casing interval. COGCC engineering staff must be notified as soon as practicable if daylighting is observed.</p>

## Best Management Practices

<u>No</u>	<u>BMP/COA Type</u>	<u>Description</u>
1	Drilling/Completion Operations	In compliance with Rule 317.p one of the first wells drilled on the Mesa N6-796 pad will be logged with an open-hole Resistivity Log and Gamma Ray Log from TD into the surface casing. All wells on the pad will have a Cement Bond Log with cased-hole Gamma Ray run on the production casing. The Form 5 Completion Report will list all the logs run in the subject well and identify the well that was logged with the open-hole Resistivity Log.
2	Drilling/Completion Operations	Anti-collision: Operator will perform an anti-collision evaluation of all active (producing, shut in, or temporarily abandoned) offset wellbores that have the potential of being within 150 feet of a proposed well prior to drilling operations for the proposed well. Notice shall be given to all offset operators prior to drilling.

Total: 2 comment(s)

### Applicable Policies and Notices to Operators

Piceance Rulison Field - Notice to Operators.

NW Colorado Notification Policy.

Notice Concerning Operating Requirements for Wildlife Protection.

Pit Design, Construction and Monitoring Requirements  
Within 3/4 mile of the Rim of the Roan Plateau.

### Attachment Check List

<u>Att Doc Num</u>	<u>Name</u>
2168012	WELL LOCATION PLAT
2168013	DEVIATED DRILLING PLAN
400847253	DIRECTIONAL DATA
400847255	MINERAL LEASE MAP
400851350	SURFACE AGRMT/SURETY
400867032	DIRECTIONAL DATA

Total Attach: 6 Files

### General Comments

<u>User Group</u>	<u>Comment</u>	<u>Comment Date</u>
Permit	Correted contact information as per opr. Corrected Lease information from E/2 and SW/2 to E/2 and SW/4 as per opr. Corrected Drilling Waste Management plans to match 2A as per opr. Final review complete.	8/20/2015 4:12:37 PM
Engineer	New bottom hole location meets 1/4 mile area review requirement. Changed distance to nearest wellbore to 330'.	7/15/2015 11:43:16 AM
Permit	Ready to pass.	7/13/2015 11:46:52 AM
Engineer	Added UIC lead review task. Offset water well check: COGCC evaluated offset water wells within one mile of this proposed well's surface hole location. The one permitted water well within the search radius shows zero for the reported depth. Depths to formation tops in offset oil and gas wells, locally-available geophysical logs, and hydrogeologic information was used to evaluate the adequacy of the operator's proposed surface casing setting depth. The surface casing covers the entire Green River formation based on offset wells. (BK-UIC 6/17/2015; Permit for monitoring well issued to Shell Minerals, permitted well to be cased to 200 ft then open hole from 200 to 225 ft. NO CONSTRUCTION INFORMATION IN DWR FILE, NO CONFIRMATION THAT WELL WAS EVER BUILT.) Quarter mile area review: The BHL of Puckett #14-6D (045-07670) is within 1/4 mile of this planned SWD well and TOC is below the Williams Fork top. Emailed operator regarding offset well mitigation. Spoke to operator 7/1/15 and they will change bottom hole location to be 1500 feet or more from a well with cement that does not cover the Ohio Creek.	6/16/2015 4:48:18 PM
Permit	Passed completeness.	6/15/2015 2:01:28 PM

Total: 5 comment(s)