



**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.)

ALL of Section 1, T7S, R97W. The E/2E/2 of Section 2, T7S, R97W. The N/2 and N/2S/2 of Section 12, T7S, R97W and various lands in T7S, R96W, T6S, R96W and T6S, R97W, 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: 2182 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: 3969 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			

**DRILLING PROGRAM**

Proposed Total Measured Depth: 7045 Feet

Distance to nearest permitted or existing wellbore penetrating objective formation: 758 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:     ONSITE          Drilling Fluids Disposal Methods:     Recycle/reuse    

Cuttings Disposal:     ONSITE          Cuttings Disposal Method:     Beneficial reuse    

Other Disposal Description:

Dry cuttings will be stockpiled on location or transported off-site to an approved facility. If cuttings meet Table 910-1 standards, they will be treated as soil, stockpiled and beneficially re-used. See comment section for disposal details.

Beneficial reuse or land application plan submitted?     No    

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	52.8#	0	84	196	84	0
SURF	16	9+5/8	36#	0	2500	1533	2500	0
1ST	8+3/4	5+1/2	15.5#	0	7045	740	7045	2000

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

The subject well is a proposed Class II, directional disposal well. Caerus Piceance LLC proposes to inject into the Ohio Creek formation. Top of Cement Design planned for 500' inside 9 5/8" surface casing or +/- 2000'. Distance to nearest well penetrating the objective formation was measured to the proposed Puckett 22C-1. The distance to lease line was measured from the BHL to the NW of the Puckett 5,141 acre lease. Please see the BMPs attached to the Form 2A Location Assessment for this well pad (Doc # 400730168).

**DISPOSAL DESCRIPTION:**

Solids control equipment consisting of shale shakers, centrifuges, and flocculating unit will be utilized to separate drill cutting solids from liquid (water). If cuttings meet Table 910-1 standards, they will be treated as soil, stockpiled on location and beneficially re-used on location or at another location as approved by COGCC Sundry Form 4. Any excess cutting will be transported to an authorized waste facility. Closed loop system will be used to separate solids from liquid. Dry cuttings will be stockpiled on location or transported off-site to an approved facility. Clean drilling fluids will be recycled and used in drilling operations at the next pad location.

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: Crissy Venturo

Title: Regulatory Analyst Date: 2/6/2015 Email: cventuro@progressivepcs.net

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: 5/1/2015

Expiration Date: 04/30/2017

**API NUMBER**  
05 045 22848 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)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) COGCC concurs with Top of Cement Design 500' inside 9 5/8" surface casing or +/- 2000' 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>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 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 DLIS 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 a 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.</p> <p>7.Operator must provide all tops of formations encountered from surface to TD on the Form 5 when submitted.</p>
	<p>Open hole resistivity and gamma logs shall be run to describe the stratigraphy of the entire well bore and to adequately verify the setting depth of surface casing and aquifer coverage. On a multi-well pad, these open hole logs are only required on one of the first wells drilled on the pad and the Drilling Completion Report - Form 5 for every well on the pad shall identify which well was logged.</p>

## Best Management Practices

<u>No BMP/COA Type</u>	<u>Description</u>

## 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

<b>Att Doc Num</b>	<b>Name</b>
2167985	WELL LOCATION PLAT
2167986	DEVIATED DRILLING PLAN
2167990	EXCEPTION LOC REQUEST
2167991	EXCEPTION LOC WAIVERS
400752509	FORM 2 SUBMITTED
400790164	MINERAL LEASE MAP
400790235	SURFACE AGRMT/SURETY
400821751	DIRECTIONAL DATA

Total Attach: 8 Files

## General Comments

<u>User Group</u>	<u>Comment</u>	<u>Comment Date</u>
Permit	Removed distance to unit boundary, unit acreage, and unit configuration as per opr. Added "and other lands" to lease description with opr approval. Attached Exception Loc Request and Waiver to Order 510-21 as per opr. Final review complete.	4/9/2015 4:01:38 PM
Engineer	Pucket 245-1 (045-13351) is greater than 1500' from the revised BHL. No offset wellbore mitigation required. Form put back in process.	4/8/2015 2:20:27 PM
Permit	Changes to form as per opr: Well is a directional well (this had been blank) Added footatges for TOPZ and BHL that were blank. (this had been blank) Corrected distance to nearest lease line from 2650' to 2182' Distance to nearest Unit Boundary from 1323' to 949' Corrected TMD from 6628' to 7045' Distance to wellbore penetrating formation from 371' to 758'. Changed Setting Depth from to 7045' Changed Cmt. Btm from 6628' to 7045'. Corrected Opr cmts to include directional disposal well, and the measured distance to lease line measured from BHL to the NW of the Puckett 5,141 acre lease. Attached new well location plat, new DS, and Data sheet. Cleared incorrect spacing order and unit configuration from spacing tab as per opr.	4/8/2015 10:47:12 AM
Engineer	Offset water well check: COGCC evaluated offset water wells within one mile of this proposed well's surface hole location. This information was used in addition to locally-available hydrogeologic information to evaluate the adequacy of the operator's proposed surface casing setting depth. The deepest water well within one mile is 605 feet. The proposed surface casing setting depth is more than 50 feet below the base of the aquifer in which water wells are screened within one mile. The surface casing covers the entire Green River formation based on offset wells. Offset well evaluation: Evaluated offset wells within 1,500 feet. COGCC picked a cement top of 5760' for Pucket 245-1 (045-13351). The top of the Williams Fork was logged as 5724'. This wellbore is about 1150' away from the Puckett SWD E1-797. Emailed operator regarding offset well mitigation and placed form on hold."	2/23/2015 4:34:02 PM
Engineer	Added UIC lead review task.	2/19/2015 5:12:35 PM
Permit	Corrected Qtr/Qtr/Lot from Tract 93 to SWNW as per opr. Corrected distane to nearest lease line from 2650' to 1533' as per opr. Ready to pass pending 2A approval.	2/18/2015 3:26:04 PM
Permit	Passed completeness.	2/17/2015 9:13:01 AM
Permit	Returned to Draft: 1. Under Surface & Minerals right to construct is granted by an SUA. The Surface Use Agreement will need to be added to attachments.	2/10/2015 12:07:50 PM

Total: 8 comment(s)