

State of Colorado Oil and Gas Conservation Commission

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FOR OGCC USE ONLY

Document Number:

401105994

Date Received:

UNDERGROUND INJECTION FORMATION PERMIT APPLICATION

Per Rule 325, this form shall be submitted with all required attachments.

A Form 31 – Intent shall be submitted and approved prior to completing an injection zone.

A Form 31 – Subsequent shall be submitted following collection of water samples and injectivity test (if performed) and must be approved prior to injection in any new injection facility.

NOTE: Per Rule 324B, an aquifer exemption is required for any injection formation with water quality less than 10,000 mg/L total dissolved solids (TDS). Contact the Commission for further requirements if the TDS as determined by water analysis for the injection zone is less than 10,000 mg/L.

Form 31 Type

☐ Intent☒ Subsequent

UIC Facility ID 159995

UIC Facility ID Required for Subsequent
Form 31

UIC FACILITY INFORMATION

Facility Name and Number: Puckett SWD

H2-797

County: GARFIELD

Facility Location: 66 / 2 / 7S / 97W / 6

Field Name and Number:

WILDCAT

99999

Facility Type: ☐ Enhanced Recovery☒ Disposal☐ Simultaneous Disposal

Single or Multiple Well Facility?

☒ Single☐ Multiple

Proposed Injection Program (Required):

Caerus proposes to inject Class II waste fluid into the Ohio Creek Formation at approximately 5829 ftMD with perforations at depths of 6045 feet to 6053 feet. Caerus will perforate and swab test the proposed interval to collect formation fluid samples to show the Ohio Creek interval in this part of field has TDS values >10,000ppm. An extended injection test will then be performed to determine the fracture gradient and a maximum allowable injection pressure. The permeability listed on the enclosed Form 31 is an educated estimate based on other UIC wells in the area. The Ohio Creek Formation comprises conglomerates, sandstones and shales. Due to the depth of the injection zones, no underground sources of drinking water will be affected by this operation. Water samples from the Ohio Creek Formation in this well indicate a TDS above 10,000 ppm TDS. Since the Puckett H2-797 SWD is located on a multi-well pad, a resistivity log will be run on one of the producing wellbores, with data gathered through the Ohio Creek section. Caerus plans to evaluate the data gathered from that log for use in the analysis of the proposed UIC well. The injection skid for the Puckett SWD H2-797 will be placed on the pad location. Fluid will be delivered to the well by pipeline and water truck. The Surface Facility Diagram shows the proposed surface facility outlining all pipelines, tanks and associated facilities. A listing of all sources of water will be submitted via Form 26 at a later date. An estimated total of 170 currently producing wells may potentially use this facility for disposal. Future development could bring that well count to over 200 wellbores, which would all be gathered via the existing pipeline, additional pipelines for future pads or trucks. The UIC well would help in minimizing truck traffic in the development area.

OPERATOR INFORMATION

OGCC Operator Number: 10456

Name of Operator: CAERUS PICEANCE LLC

Address: 1001 17TH STREET #1600

City: DENVER

State: CO

Zip: 80202

Contact Name and Telephone:

Name: Reed Haddock

Phone: (720) 880-6369

Fax: (303) 565-4606

Email: rhaddock@caerusoilandgas.com

INJECTED FLUID TYPE

All injected fluids must be Exempt E&P waste per RCRA Subpart C.

(Check all that apply.)

☒ Produced Water☐ Natural Gas☐ CO2☐ Drilling Fluids☐ Exempt Gas Plant Waste☐ Used Workover Fluids☐ Flowback Fluids☐ Other Fluids (describe):

Commercial Disposal Facility

☐ Yes☒ No

Commercial UIC Bond Surety ID:

Commercial Facility Description: Describe the physical region of the facility, the details of the operations, and the type of fluids to be injected.

PROPOSED INJECTION FORMATIONS

FORMATION (Name): OHIO CREEK Porosity: 12 %
Formation TDS: 15000 mg/L Frac Gradient: 0.7 psi/ft Permeability: 350 mD
Proposed Stimulation Program: ☐ Acid ☐ Frac Treatment ☐ None

ANTICIPATED FACILITY OPERATIONS CONDITIONS

Under normal operating conditions, estimated TOTAL fluid injection rates and pressures for this facility:

FOR WATER: Daily Injection Rate Range From 100 to 8000 bbls/day
Surface Injection Pressure Range From 850 to 2500 psi
FOR GAS: Daily Injection Rate Range From _____ to _____ mcf/day
Surface Injection Pressue Range From _____ to _____ psi

Estimated Initial Injection Date: 12/1/2016

AREA OF REVIEW OIL and GAS WELL EVALUATION SUMMARY

Review all existing wells within 1/2 mile for injection formation isolation.

Area Review Date: 6/27/2016

Total number of Oil & Gas Wells within Area of Review: 35

ABANDONED WELLS (All wells that have been plugged: PA and DA status))

Total within Area of Review	0
Number To Be Re-Plugged	0

ACTIVE WELLS (All wells that have not been plugged: AC, DG, DM, IJ, PR, SU, SI, TA, WO, XX, UN status)

Total within Area of Review	35
Number Requiring Casing Repair	0
Number To Be Plugged	0

Operator's Area of Review Contact Email: nnaeve@caerusoilandgas.com

☐ No Wells within 2,640'

I hereby certify that the statements made in this form are, to the best of my knowledge, true, correct, and complete.

Print Name: Reed Haddock Signed: _____

Title: Sr. Regulatory Specialist Date: _____

COGCC Approved: _____ Date: _____

Form 31 - Intent Expiration Date: _____

Per Rule 325.o, a 90 day extension of the Expiration Date may be requested via a Sundry Notice, Form 4 submitted prior to Form 31- Intent expiration

Order Number: _____ UIC FACILITY ID: 159995

CONDITIONS OF APPROVAL, IF ANY:

Date Run: 10/12/2016 Doc [#401105994]

COA Type	Description	
<u>Attachment Check List</u>		
<u>Att Doc Num</u>	<u>Name</u>	
401105996	MAP OF SURFACE OWNERS ¼-MILE	
401105998	NOTICE TO SURFACE & MINERAL OWNERS	
401106405	MAP OF MINERAL OWNERS ¼-MILE	
401106406	OTHER	
401107308	LIST OF SURFACE OWNERS ¼-MILE	
401107309	LIST OF MINERAL OWNERS ¼-MILE	
401126088	ANALYSIS OF INJECTION ZONE WATER	
401126089	ANALYSIS OF INJECTION WATER	
Total Attach: 8 Files		
<u>General Comments</u>		
<u>User Group</u>	<u>Comment</u>	<u>Comment Date</u>
Total: 0 comment(s)		