

**APPLICATION FOR PERMIT TO:**

**Drill**       Deepen       Re-enter       Recomplete and Operate

TYPE OF WELL    OIL <input type="checkbox"/> GAS <input checked="" type="checkbox"/> COALBED <input type="checkbox"/> OTHER _____ ZONE TYPE       SINGLE ZONE <input checked="" type="checkbox"/> MULTIPLE ZONES <input type="checkbox"/> COMMINGLE ZONES <input type="checkbox"/>	Refiling <input type="checkbox"/> Sidetrack <input type="checkbox"/>
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Date Received:  
02/21/2018

Well Name: CLOUGH      Well Number: RWF 421-10  
 Name of Operator: TEP ROCKY MOUNTAIN LLC      COGCC Operator Number: 96850  
 Address: PO BOX 370  
 City: PARACHUTE      State: CO      Zip: 81635  
 Contact Name: Vicki Schoeber      Phone: (970)263-2721      Fax: (    )  
 Email: vschoeber@terraep.com

**RECLAMATION FINANCIAL ASSURANCE**  
 Plugging and Abandonment Bond Surety ID: 20160057

**WELL LOCATION INFORMATION**  
 QtrQtr: NESW      Sec: 3      Twp: 6S      Rng: 94W      Meridian: 6  
 Latitude: 39.552426      Longitude: -107.877095  
 Footage at Surface: 1782 Feet      FNL/FSL FSL 1816 Feet      FEL/FWL FWL  
 Field Name: RULISON      Field Number: 75400  
 Ground Elevation: 6719      County: GARFIELD  
 GPS Data:  
 Date of Measurement: 09/17/2010      PDOP Reading: 2.4      Instrument Operator's Name: J. KIRKPATRICK  
 If well is  Directional       Horizontal (highly deviated)      **submit deviated drilling plan.**  
 Footage at Top of Prod Zone:      FNL/FSL      FEL/FWL      Bottom Hole:      FNL/FSL      FEL/FWL  
    834      FNL      1331      FWL      834      FNL      1331      FWL  
    Sec: 10      Twp: 6S      Rng: 94W      Sec: 10      Twp: 6S      Rng: 94W

**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.)

T6S-R94W  
SEC. 3: NW4SW4, S2S2, NE4SE4  
SEC. 7: SE4  
SEC. 8: S2  
SEC. 9: N2, N2S2, S2SW4, SW4SE4  
SEC. 10: NW4NE4, NW4  
SEC. 17: LOTS 2-6, 25, 26  
SEC. 18: NE4, E2W2, NE4SE4, LOTS 1-4  
SEC. 19: LOTS 3-8, 13-15

Total Acres in Described Lease: 2573 Described Mineral Lease is:  Fee  State  Federal  Indian

Federal or State Lease # COC62160

Distance from Completed Portion of Wellbore to Nearest Lease Line of described lease: 1398 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: 487 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 proposed wellbore to nearest completed portion of offset wellbore permitted or completed in the same formation: 339 Feet

Distance from Completed Portion of Wellbore to Nearest Unit Boundary 834 Feet (Enter 5280 for distance greater than 1 mile.)

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

## SPACING & FORMATIONS COMMENTS

CA - COC71171, N2 of Section 10, T6S-R94W, Top of WMFK to Base of WMFK

## 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	139-40	320	Sec 10 N2

## DRILLING PROGRAM

Proposed Total Measured Depth: 10341 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 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: Cuttings trench

Other Disposal Description:

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	26	18	47.4	0	80	134	80	0
SURF	13+1/2	9+5/8	36	0	1100	266	1100	0
1ST	8+3/4	4+1/2	11.6	0	10341	883	10341	5604

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 application is in a Comprehensive Drilling Plan No CDP #: \_\_\_\_\_

Location ID: 422211

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: Vicki Schoeber

Title: Regulatory Specialist Date: 2/21/2018 Email: vschoeber@terraep.com

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: 

Director of COGCC Date: 4/3/2018

Expiration Date: 04/02/2020

**API NUMBER**

05 045 23926 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>
	Operator shall comply with Notice to Operators: Interim Reclamation Procedures for Delayed Operations (dated January 5, 2017).
	<p>1) Operator shall comply with the most current revision of the Northwest Notification Policy.</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 that Notice to Operators are superseded by the requirements of the most current revision of the Northwest Colorado Notification Policy (see Condition of Approval #1).</p> <p>3) Operator shall provide cement coverage from the production casing shoe (4+1/2" FIRST STRING) to a minimum of 200' above the Lower Wasatch (as defined by COGCC in the report "Casing and Cement Standards for Geologic Isolation Piceance Basin Bradenhead Monitoring Area and Nearby Fields," dated April 18, 2016, COGCC Document No. 2056199, Appendix A Field Scout Cards and Annotated Type Logs) to provide isolation of the Lower Wasatch, all Mesaverde Group formations including the Ohio Creek Formation, and underlying formations, if penetrated. Verify production casing cement coverage with a cement bond log.</p>

## Best Management Practices

<u>No</u>	<u>BMP/COA Type</u>	<u>Description</u>
1	Drilling/Completion Operations	The Clough NR 422-3 (API #05-045-20525), one of the first wells drilled on this pad, was logged with an open hole resistivity and gamma ray log (Open Hole Triple Combo) from TD into the surface casing. All wells on the pad will have a cement bond log (CBL) 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 "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.

Total: 1 comment(s)

## Applicable Policies and Notices to Operators

Piceance Rulison Field - Notice to Operators.

<http://cogcc.state.co.us/documents/reg/Policies/NoticeToOp-20060623-2.pdf>

NW Colorado Notification Policy.

[http://cogcc.state.co.us/documents/reg/Policies/nw\\_notification\\_procedures.pdf](http://cogcc.state.co.us/documents/reg/Policies/nw_notification_procedures.pdf)

Notice Concerning Operating Requirements for Wildlife Protection.

[http://cogcc.state.co.us/documents/reg/Policies/Wildlife\\_Notice.pdf](http://cogcc.state.co.us/documents/reg/Policies/Wildlife_Notice.pdf)

## Attachment Check List

<u>Att Doc Num</u>	<u>Name</u>
401418320	FORM 2 SUBMITTED
401539901	WELL LOCATION PLAT
401543942	DIRECTIONAL DATA
401543944	DEVIATED DRILLING PLAN
401543946	SURFACE AGRMT/SURETY

401551643

FED. DRILLING PERMIT

Total Attach: 6 Files

**General Comments**

<b><u>User Group</u></b>	<b><u>Comment</u></b>	<b><u>Comment Date</u></b>
Permit	Log referenced in BMP meets 317.p criteria. Final review complete.	03/30/2018
Engineer	Offset Well Evaluation: Existing offset oil and gas wells within 1,500 feet of the wellbores on this pad meet standards. No mitigation required.  Offset water well check: There are no permitted water wells within one mile of this proposed surface hole location.	03/26/2018
Permit	Added Sec 10 N2 to unit configuration with operator concurrence. Preliminary review complete.	03/21/2018
Permit	Form passes completeness.	03/01/2018

Total: 4 comment(s)