

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 checked="" type="checkbox"/> Sidetrack <input type="checkbox"/>
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Date Received:
03/09/2017

Well Name: RWF Well Number: 721-44-28-HMB2

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: SWSE Sec: 21 Twp: 6S Rng: 94W Meridian: 6
 Latitude: 39.503923 Longitude: -107.888832

Footage at Surface: <u>154</u> Feet	FNL/FSL	FEL/FWL
<u>FSL</u> <u>1389</u> Feet	<u>FEL</u>	

Field Name: RULISON Field Number: 75400
 Ground Elevation: 5274 County: GARFIELD

GPS Data:
 Date of Measurement: 07/14/2011 PDOP Reading: 2.6 Instrument Operator's Name: J. KIRKPATRICK

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

Footage at Top of Prod Zone: <u>42</u> Feet	FNL/FSL	FEL/FWL	Bottom Hole: <u>211</u> Feet	FNL/FSL	FEL/FWL
<u>FNL</u> <u>640</u> Feet	<u>FEL</u>		<u>FSL</u> <u>667</u> Feet	<u>FEL</u>	

Sec: 28 Twp: 6S Rng: 94W Sec: 28 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: Yes

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.)

Lease in well file.
Sections 21 and 28, T6S-R94W contains 549 acres.

Total Acres in Described Lease: 9459 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: 0 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: 321 Feet
Above Ground Utility: 207 Feet
Railroad: 1131 Feet
Property Line: 240 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: 5280 Feet

Distance from Completed Portion of Wellbore to Nearest Unit Boundary 301 Feet (Enter 5280 for distance greater than 1 mile.)

Federal or State Unit Name (if appl): _____ Unit Number: _____

SPACING & FORMATIONS COMMENTS

OBJECTIVE FORMATIONS

Objective Formation(s)	Formation Code	Spacing Order Number(s)	Unit Acreage Assigned to Well	Unit Configuration (N/2, SE/4, etc.)
MANCOS	MNCS	139-120	1280	All of Sec 21 & 28

DRILLING PROGRAM

Proposed Total Measured Depth: 16675 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 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? Yes

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:

Cuttings Management Trench

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	24	20	52.7	0	80	30	80	0
SURF	17+1/2	13+3/8	68	0	2300	761	2300	0
1ST	12+1/4	9+5/8	47	0	10505	1276	10505	4100
S.C. 1.1	12+1/4	9+5/8	47	0	4100	644	4100	1300
2ND	7+7/8	5+1/2	23	0	16675	576	16675	9505

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 permit refile is to allow for changes in the TEP Rocky Mountain LLC drilling schedule. No changes have been made to the surface hole location, bottomhole location, lease description or surface use since the original permit was issued.

Note: End of Completions is 301' FSL, 667' FEL, Sec. 28, T6S, R94W.

On file is a Summary and Horizontal Synthetic Based Mud Best Practices document.

This application is in a Comprehensive Drilling Plan No CDP #: _____

Location ID: 324053

Is this application being submitted with an Oil and Gas Location Assessment application? No

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: 3/9/2017 Email: VSCHOEBER@TERRAEP.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: 9/15/2017

Expiration Date: 09/14/2019

API NUMBER
05 045 22829 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
	<p>The moisture content of water/bentonite based mud (WBM) generated drill cuttings managed onsite shall be kept as low as practicable to prevent accumulation of liquids greater than de minimis amounts. After drilling and completion operations have been completed, the WBM drill cuttings that will remain on the well pad location (cuttings management area, the cut portion of the pad, cuttings trench, dry cuttings drilling pit), must be sampled and meet the applicable standards of Table 910-1. No liners are allowed to be disposed of with the drill cuttings. After the drill cuttings have been amended (if necessary) and placed on the well pad, sampling frequency of the drill cuttings (to be determined by the operator) shall be representative of the material left on location. No offsite disposal of cuttings to another oil and gas location (TEP's permitted Cuttings Trench locations or nearby locations) shall occur without prior approval of a Form 4 Sundry Notice specifying disposal location and waste characterization method. Commercial disposal of drill cuttings will also require notification to COGCC via a Form 4 Sundry Notice.</p> <p>A closed loop system must be implemented during drilling. All cuttings generated during drilling with oil based mud (OBM) must be kept in tanks/containers, or placed on a lined/bermed portion of the well pad; prior to disposition. The moisture content of any OBM-generated drill cuttings in a cuttings containment area or pile shall be as low as practicable to prevent accumulation of liquids greater than de minimis amounts. At the time of closure, if the drill cuttings are to be left onsite, they must be sampled and also meet the applicable standards of Table 910-1. Representative cuttings samples will be analyzed for all Table 910-1 constituents. Any material which does not meet Table 910-1 criteria will either be manifested and disposed offsite at an approved commercial facility, or amended further onsite to comply with Table 910-1. If operator determines that long-term onsite management of oil based mud cuttings is necessary, an approved Form 27 remediation plan will be required. All liners associated with oil based drilling mud and cuttings must be disposed of offsite per CDPHE rules and regulations.</p>
	Operator shall comply with Notice to Operators: Interim Reclamation Procedures for Delayed Operations (dated January 5, 2017).
	If conductors are preset, operator shall comply with Notice to Operators: Procedures for Preset Conductors (dated September 1, 2016, revised October 6, 2016).
	<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 intermediate casing shoe (9+5/8" 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 intermediate casing cement coverage with a cement bond log.</p> <p>4) The operator's planned top of cement for the production casing (5 1/2" Second String) at about 1000' above the intermediate casing shoe is acceptable. Verify production casing cement coverage with a cement bond log.</p> <p>5) The Operator shall monitor all annulus and casing pressures of offset well RULISON DEEP #1 (API#045-06877). Monitoring shall occur from 24 hours prior to stimulation and shall continue until 24 hours after stimulation is complete. Recording shall be at a frequency of at least once per 24 hours with the capability of recording the maximum pressure observed during each 24 hour period. Operator shall notify COGCC Engineering staff if pressures increase by more than 200 psig.</p>

Best Management Practices

No	<u>BMP/COA Type</u>	<u>Description</u>
1	Drilling/Completion Operations	TEP will run triple-combo open hole logs in the vertical section of Mancos wells from KOP to base of surface casing on at least one well per pad location. CBL log will also be run from KOP up to surface. MWD/LWD logs with GR will be run for the lateral portion of the wells. Form 5 Completion Reports will identify wells with open hole logs.

Total: 1 comment(s)

Applicable Policies and Notices to Operators

Policy
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
Notice Concerning Operating Requirements for Wildlife Protection. http://cogcc.state.co.us/documents/reg/Policies/Wildlife_Notice.pdf

Attachment Check List

<u>Att Doc Num</u>	<u>Name</u>
401217342	FORM 2 SUBMITTED

Total Attach: 1 Files

General Comments

<u>User Group</u>	<u>Comment</u>	<u>Comment Date</u>
Permit	Final review complete.	09/15/2017
Permit	Added OGLA review task to verify BMP's and waste management program. Preliminary review complete.	04/06/2017
LGD	Pass, KHW	03/24/2017
Engineer	<p>Offset Well Evaluation: Offset well evaluation data submitted with original Form 2 is in the well file. Evaluated offset well RULISON DEEP #1 (API#045-06877): Drilled to Entrada. Dakota, Morrison, Entrada completed then abandoned with CICR's and squeezes. Mancos completed and abandoned with CIBP at 8275', no cement reported on top. Eleven cement squeezes from 6470' to 5069' with a total of 1300 sxs cement pumped then drilled out. Currently producing from Mesaverde perforations from 5185' to 7071'. Monitoring of all annulus and casing pressures required during offset completions.</p> <p>Evaluated offset well Vassar/Heath RMV 229-27 (API#045-07610). Meets standards. No mitigation required.</p> <p>Offset well mitigation Condition of Approval has been modified for this permit refile.</p> <p>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 geophysical logs and hydrogeologic information to evaluate the adequacy of the operator's proposed surface casing setting depth. The deepest water well within one mile is 100 feet.</p>	03/15/2017
Permit	Passed Completeness	03/14/2017

Total: 5 comment(s)