

State of Colorado
Oil and Gas Conservation Commission

1120 Lincoln Street, Suite 801, Denver, Colorado 80203
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DE	ET	OE	ES
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SUNDRY NOTICE

Submit a signed original. This form is to be used for general, technical and environmental sundry information. For proposed or completed operations, describe in full in Comments or provide as an attachment. Identify Well by API Number; identify Oil and Gas Location by Location ID Number; identify other Facility by Facility ID Number.

OGCC Operator Number: 96850 Contact Name Jeff Kirtland
 Name of Operator: TEP ROCKY MOUNTAIN LLC Phone: (970) 263-2736
 Address: PO BOX 370 Fax: ()
 City: PARACHUTE State: CO Zip: 81635 Email: jkirtland@terraep.com

Complete the Attachment
Checklist

OP OGCC

API Number : 05- 045 24035 00 OGCC Facility ID Number: 457063
 Well/Facility Name: FEDERAL Well/Facility Number: RWF 442-18
 Location QtrQtr: LOT 4 Section: 17 Township: 6S Range: 94W Meridian: 6
 County: GARFIELD Field Name: RULISON
 Federal, Indian or State Lease Number: COC62160

Survey Plat		
Directional Survey		
Srfc Eqpmt Diagram		
Technical Info Page		
Other		

CHANGE OF LOCATION OR AS BUILT GPS REPORT

- Change of Location * As-Built GPS Location Report As-Built GPS Location Report with Survey

* Well location change requires new plat. A substantive surface location change may require new Form 2A.

SURFACE LOCATION GPS DATA Data must be provided for Change of Surface Location and As Built Reports.

Latitude _____ PDOP Reading _____ Date of Measurement _____
 Longitude _____ GPS Instrument Operator's Name _____

LOCATION CHANGE (all measurements in Feet)

Well will be: _____ (Vertical, Directional, Horizontal)

Change of **Surface** Footage **From** Exterior Section Lines:

Change of **Surface** Footage **To** Exterior Section Lines:

Current **Surface** Location **From** QtrQtr LOT 4 Sec 17

New **Surface** Location **To** QtrQtr _____ Sec _____

Change of **Top of Productive Zone** Footage **From** Exterior Section Lines:

Change of **Top of Productive Zone** Footage **To** Exterior Section Lines:

Current **Top of Productive Zone** Location **From** Sec 18

New **Top of Productive Zone** Location **To** Sec _____

Change of **Bottomhole** Footage **From** Exterior Section Lines:

Change of **Bottomhole** Footage **To** Exterior Section Lines:

Current **Bottomhole** Location Sec 18 Twp 6S

New **Bottomhole** Location Sec _____ Twp _____

Is location in High Density Area? _____

Distance, in feet, to nearest building _____, public road: _____, above ground utility: _____, railroad: _____,

property line: _____, lease line: _____, well in same formation: _____

Ground Elevation _____ feet Surface owner consultation date _____

FNL/FSL		FEL/FWL	
<u>541</u>	<u>FNL</u>	<u>21</u>	<u>FWL</u>
_____	_____	_____	_____
Twp <u>6S</u>	Range <u>94W</u>	Meridian <u>6</u>	
Twp _____	Range _____	Meridian _____	
<u>1872</u>	<u>FNL</u>	<u>180</u>	<u>FEL</u>
_____	_____	_____	_____
Twp <u>6S</u>	Range <u>94W</u>		
Twp _____	Range _____		
<u>1872</u>	<u>FNL</u>	<u>180</u>	<u>FEL</u>
_____	_____	_____	_____
Twp <u>6S</u>	Range <u>94W</u>		
Twp _____	Range _____		

**

**

** attach deviated drilling plan

Comments:

ENGINEERING AND ENVIRONMENTAL WORK

NOTICE OF CONTINUED TEMPORARILY ABANDONED STATUS

Indicate why the well is temporarily abandoned and describe future plans for utilization in the COMMENTS box below or provide as an attachment, as required by Rule 319.b.(3).

Date well temporarily abandoned _____ Has Production Equipment been removed from site? _____

Mechanical Integrity Test (MIT) required if shut in longer than 2 years. Date of last MIT _____

SPUD DATE: _____

TECHNICAL ENGINEERING AND ENVIRONMENTAL WORK

Details of work must be described in full in the COMMENTS below or provided as an attachment.

NOTICE OF INTENT Approximate Start Date 11/21/2019

REPORT OF WORK DONE Date Work Completed _____

<input type="checkbox"/> Intent to Recomplete (Form 2 also required)	<input type="checkbox"/> Request to Vent or Flare	<input type="checkbox"/> E&P Waste Mangement Plan
<input type="checkbox"/> Change Drilling Plan	<input type="checkbox"/> Repair Well	<input type="checkbox"/> Beneficial Reuse of E&P Waste
<input type="checkbox"/> Gross Interval Change	<input type="checkbox"/> Rule 502 variance requested. Must provide detailed info regarding request.	
<input checked="" type="checkbox"/> Other <u>Low TOC COA</u>	<input type="checkbox"/> Status Update/Change of Remediation Plans for Spills and Releases	

COMMENTS:

TEP Rocky Mountain LLC (TEP) requests a waiver of the top of cement COA applied to the RWF 442-18 that requires the "provide cement coverage from the production casing shoe (4+1/2" FIRST STRING) to a minimum of 200' above the Wasatch G to provide isolation due to offset Wasatch G Sand production within one mile of this well, all Mesaverde Group formations including the Ohio Creek Formation, and underlying formations, if penetrated. Verify production casing cement coverage with a cement bond log." COGCC was notified of Low TOC prior to completions operations on 6/14/19. TEP believes that the intent of the COA has been met as there is de minimis potential for fluid migration between any gas or water bearing formations and/or coalbeds in the uncemented interval of the well. There is a constant fluid level present in the production casing annulus, which is an indication of no fluid cross-zone flow. An echometer was taken 11/8/19 and showed a fluid level of approximately 324 feet above the surface casing shoe. A second echometer was taken 11/14/19 and showed a fluid level of 321 feet above the surface casing shoe. The result of echometer readings demonstrate fluid levels are static and not changing. The bradenhead pressure on the well during the echometer tests was 8 psi on 11/8 and 8 psi on 11/14. The presence of bradenhead pressure that is neither increasing nor decreasing suggests the gas and fluid column is static.

TEP believes the system permeability is around .5md in the Wasatch G Formation, if present. There is core cut from the Wasatch G Formation in the PA 321-27 (0504521861) well. TEP does have access to the cores and core analyses if needed. The Wasatch G is a sandy fluvial unit within a formation dominated by mudstones. There are five Wasatch G producers within a 5-mile radius of the RWF 442-18. The closest Wasatch G producer, the DOE 1-W-17 is >1 mile SE.

Comment on Mechanical Integrity: TEP believes that when a well has low static bradenhead pressure and adequate cement coverage above the shallowest perforation, introducing squeeze perforations above the cement top introduces risk for cross flow. Squeeze perfs are more likely to lose mechanical integrity than new casing over the life of the well due to normal operations. Unless there are sources of bradenhead pressure behind the casing to attempt to eliminate, TEP does not encourage compromising the mechanical integrity of new casing by creating cement perforations. The RWF 442-18 top of cement is 3,636 feet and top of last perforation is 5,649 feet. TEP has 2,013 feet of cement over the top perforation. Our recommendation would be to not remediate this low TOC. If an increase in bradenhead pressure is experienced, TEP will address the issue accordingly, which may include remediation.

CASING AND CEMENTING CHANGES

Casing Type	Size	Of	/	Hole	Size	Of	/	Casing	Wt/Ft	Csg/LinTop	Setting Depth	Sacks of Cement	Cement Bottom	Cement Top

H2S REPORTING

Data Fields in this section are intended to document Sample and Location Data associated with the collection of a Gas Sample that is submitted for Laboratory Analysis.

Gas Analysis Report must be attached.

H2S Concentration: _____ in ppm (parts per million)

Date of Measurement or Sample Collection _____

Description of Sample Point:

Absolute Open Flow Potential _____ in CFPD (cubic feet per day)

Description of Release Potential and Duration (If flow is not open to the atmosphere, identify the duration in which the container or pipeline would likely be opened for servicing operations.):

Distance to nearest occupied residence, school, church, park, school bus stop, place of business, or other areas where the public could reasonably be expected to frequent: _____

Distance to nearest Federal, State, County, or municipal road or highway owned and principally maintained for public use: _____

COMMENTS:

Best Management Practices

No BMP/COA Type

Description

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

Operator Comments:

[Empty box for Operator Comments]

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

Signed: _____ Print Name: Jeff Kirtland
Title: Regulatory Lead Email: jkirtland@terraep.com Date: 11/21/2019

Based on the information provided herein, this Sundry Notice (Form 4) complies with COGCC Rules and applicable orders and is hereby approved.

COGCC Approved: Katz, Aaron Date: 12/4/2019

CONDITIONS OF APPROVAL, IF ANY:

<u>COA Type</u>	<u>Description</u>
	1) The COA requiring cement coverage 200' above the top of the Mesa Verde (Wasatch G or Ohio Creek if present) is waived for this well. Operator is to monitor the bradenhead and notify COGCC engineering staff if the pressure exceeds 0.25 times the surface casing setting depth (TVD) in psi. 2) Operator is to perform a bradenhead test and submit the results on a Form 17 within one month of this form approval and annually thereafter.

General Comments

<u>User Group</u>	<u>Comment</u>	<u>Comment Date</u>
		Stamp Upon Approval

Total: 0 comment(s)

Attachment Check List

<u>Att Doc Num</u>	<u>Name</u>
402246101	SUNDRY NOTICE APPROVED-OTHER
402253224	FORM 4 SUBMITTED

Total Attach: 2 Files