

FORM  
6Rev  
05/18

## State of Colorado

## Oil and Gas Conservation Commission

1120 Lincoln Street, Suite 801, Denver, Colorado 80203 Phone: (303) 894-2100 Fax: (303) 894-2109



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Document Number:

401801225

Date Received:

10/18/2018

## WELL ABANDONMENT REPORT

This form is to be submitted as an Intent to Abandon whenever an abandonment is planned on a borehole. After the abandonment is complete, this form shall again be submitted as a Subsequent Report of the actual work completed. The approved intent shall be valid for six months after the approval date, after that period, a new intent will be required. Attachments required with the Intent to Abandon are wellbore diagrams of the current configuration and the proposed configuration with plugs set.

A Subsequent Report of Abandonment shall indicate the actual work completed. Attachments required with a Subsequent Report are a wellbore diagram showing plugs that were set and casing remaining in the hole, the job summaries from all plugging contractors used, including wireline and cementing (third party verification) and any logs that may have been run during abandonment.

OGCC Operator Number: 69175

Contact Name: Jenifer Hakkarinen

Name of Operator: PDC ENERGY INC

Phone: (303) 8605800

Address: 1775 SHERMAN STREET - STE 3000

Fax:

City: DENVER State: CO Zip: 80203

Email: Jenifer.Hakkarinen@pdce.com

For "Intent" 24 hour notice required,

Name: Kraich, Adam

Tel: (970) 420-0536

COGCC contact:

Email: adam.kraich@state.co.us

API Number 05-123-27370-00

Well Name: ROTHARMEL

Well Number: 21-32

Location: QtrQtr: NENW Section: 32 Township: 7N Range: 66W Meridian: 6

County: WELD

Federal, Indian or State Lease Number:

Field Name: EATON

Field Number: 19350

☒ Notice of Intent to Abandon☐ Subsequent Report of Abandonment

## Only Complete the Following Background Information for Intent to Abandon

Latitude: 40.536720

Longitude: -104.805690

GPS Data:

Date of Measurement: 12/13/2006

PDOP Reading: 2.9

GPS Instrument Operator's Name: H. L. TRACY

Reason for Abandonment: ☐ Dry☒ Production Sub-economic☐ Mechanical Problems☐ OtherCasing to be pulled: ☐ Yes☒ No

Estimated Depth:

Fish in Hole: ☐ Yes☒ No

If yes, explain details below

Wellbore has Uncemented Casing leaks: ☐ Yes☒ No

If yes, explain details below

Details:

## Current and Previously Abandoned Zones

Formation	Perf. Top	Perf. Btm	Abandoned Date	Method of Isolation	Plug Depth
CODELL	7375	7385			

Total: 1 zone(s)

## Casing History

Casing Type	Size of Hole	Size of Casing	Weight Per Foot	Setting Depth	Sacks Cement	Cement Bot	Cement Top	Status
SURF	12+1/4	8+5/8	24	944	660	944	0	VISU
1ST	7+7/8	4+1/2	10.5	7,556	755	7,556	0	CBL

## Plugging Procedure for Intent and Subsequent Report

CIBP #1: Depth 7325 with 2 sacks cmt on top. CIBP #2: Depth 7000 with 2 sacks cmt on top.  
CIBP #3: Depth \_\_\_\_\_ with \_\_\_\_\_ sacks cmt on top. CIBP #4: Depth \_\_\_\_\_ with \_\_\_\_\_ sacks cmt on top.  
CIBP #5: Depth \_\_\_\_\_ with \_\_\_\_\_ sacks cmt on top.

NOTE: Two(2) sacks cement required on all CIBPs.

Set 135 sks cmt from 1700 ft. to 0 ft. Plug Type: CASING Plug Tagged: ☐  
Set \_\_\_\_\_ sks cmt from \_\_\_\_\_ ft. to \_\_\_\_\_ ft. Plug Type: \_\_\_\_\_ Plug Tagged: ☐  
Set \_\_\_\_\_ sks cmt from \_\_\_\_\_ ft. to \_\_\_\_\_ ft. Plug Type: \_\_\_\_\_ Plug Tagged: ☐  
Set \_\_\_\_\_ sks cmt from \_\_\_\_\_ ft. to \_\_\_\_\_ ft. Plug Type: \_\_\_\_\_ Plug Tagged: ☐  
Set \_\_\_\_\_ sks cmt from \_\_\_\_\_ ft. to \_\_\_\_\_ ft. Plug Type: \_\_\_\_\_ Plug Tagged: ☐

Perforate and squeeze at \_\_\_\_\_ ft. with \_\_\_\_\_ sacks. Leave at least 100 ft. in casing \_\_\_\_\_ CICR Depth

Perforate and squeeze at \_\_\_\_\_ ft. with \_\_\_\_\_ sacks. Leave at least 100 ft. in casing \_\_\_\_\_ CICR Depth

Perforate and squeeze at \_\_\_\_\_ ft. with \_\_\_\_\_ sacks. Leave at least 100 ft. in casing \_\_\_\_\_ CICR Depth

(Cast Iron Cement Retainer Depth)

Set \_\_\_\_\_ sacks half in. half out surface casing from \_\_\_\_\_ ft. to \_\_\_\_\_ ft. Plug Tagged: ☐

Set \_\_\_\_\_ sacks at surface

Cut four feet below ground level, weld on plate Above Ground Dry-Hole Marker: ☐ Yes ☐ No

Set \_\_\_\_\_ sacks in rat hole Set \_\_\_\_\_ sacks in mouse hole

### Additional Plugging Information for Subsequent Report Only

Casing Recovered: \_\_\_\_\_ ft. \_\_\_\_\_ inch casing Plugging Date: \_\_\_\_\_  
of \_\_\_\_\_

\*Wireline Contractor: \_\_\_\_\_ \*Cementing Contractor: \_\_\_\_\_

Type of Cement and Additives Used: \_\_\_\_\_

Flowline/Pipeline has been abandoned per Rule 1105 ☐ Yes ☐ No \*ATTACH JOB SUMMARY

Technical Detail/Comments:

Rotharmel 21-32 (05-123-27370)/Plugging Procedure (Intent)

Producing Formation: Codell: 7375'-7385'

Upper Pierre Aquifer: 420'-1466'

TD: 7570' PBTD: 7538.7'

Surface Casing: 8 5/8" 24# @ 944' w/ 660 sxs cmt.

Production Casing: 4 1/2" 10.5# @ 7556' w/ 755 sxs cmt (TOC @ Surface' - CBL).

Tubing: 2 3/8" tubing set @ 7361' (3/20/2007).

Proposed Procedure:

1. MIRU pulling unit. Pull 2 3/8" tubing.

2. RU wireline company.

3. TIH with CIBP. Set BP at 7325'. Top with 2 sxs cmt.

4. TIH with CIBP. Set BP at 7000'. Top with 2 sxs cmt.

5. TIH with tubing to 1700'. RU cementing company. Mix and pump 135 sxs 15.8#/gal CI G cement down tubing (Pierre coverage from 1700'-1200'). Cement should circulate to surface. TOOH with tubing.

6. Cut surface casing 6' below ground level and weld on cap.

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

Signed: \_\_\_\_\_ Print Name: Jenifer Hakkarinen

Title: REg TEch Date: 10/18/2018 Email: JEnifer.Hakkarinen@pdce.com

Based on the information provided herein, this Well Abandonment Report (Form 6) complies with COGCC Rules and applicable orders and is hereby approved.

**CONDITIONS OF APPROVAL, IF ANY:**

Expiration Date: 7/1/2019

**COA Type****Description**

	<p>Venting</p> <p>Operator shall implement measures to control unnecessary and excessive venting, to protect the health and safety of the public, and to ensure that vapors and odors from well plugging operations do not constitute a nuisance or hazard to public welfare.</p>
	<p>Bradenhead Testing</p> <ul style="list-style-type: none"> <li>• Prior to the start of plugging operations, a bradenhead test shall be performed and reported if there has not been a reported bradenhead test within the 60 days immediately preceding the start of plugging operations.</li> <li>• If any of the following conditions exist then sampling of all fluids is required and sampling methods shall comply with Operator Guidance – Bradenhead Testing and Reporting Instructions, Appendix A: Liquid and Gas Sampling as found on the COGCC website, cogcc.state.co.us.             <ol style="list-style-type: none"> <li>1) The initial pressure measurement on the bradenhead is greater than 25 psi, prior to blowing down any liquid or gas from the bradenhead valve, or</li> <li>2) Pressure remains at the conclusion of the test, or</li> <li>3) Any liquids are present anytime during the test. If so, then stop the test as soon as liquids are present and sample before resuming the test.</li> </ol> </li> <li>• Form 17 Bradenhead Test Report shall be submitted within 10 days of the test.</li> <li>• If samples are collected, copies of all final laboratory analytical results shall be provided to the COGCC within three (3) months of collecting the samples.</li> </ul>
	<p>Plugging</p> <ul style="list-style-type: none"> <li>• Provide 48 hour notice of plugging MIRU via electronic Form 42.</li> <li>• Plugs and squeezes will be placed as stated in the plugging procedure of the approved NOI unless revised by COA or prior approval from COGCC is obtained.</li> <li>• Check for fluid migration or shut-in pressure on the well prior to pumping any plug (open hole, annular or casing) that isolates deepest aquifer or the surface casing shoe (whichever is deeper). Contact COGCC Engineer for revised plugging orders if well is not static at this time, prior to continuing with plugging operations. Document well conditions in operations summary attached to the Form 6 SRA.</li> <li>• Place a 50' plug (minimum) at the surface, both inside the inner most casing and in all annular spaces. All other cement plugs, without mechanical isolation, shall have at least 100' of cement left in the casing.</li> <li>• Properly abandon on-location flowlines as per Rule 1105. File electronic Form 42 once abandonment complete. Within 30 days of an operator completing abandonment requirements for an off-location flowline or crude oil transfer line the operator must submit a Flowline Report, Form 44.</li> </ul>

**Attachment Check List****Att Doc Num****Name**

401801225	FORM 6 INTENT SUBMITTED
401801244	WELLBORE DIAGRAM
401801246	WELLBORE DIAGRAM
401801250	GYRO SURVEY

Total Attach: 4 Files

### General Comments

<u>User Group</u>	<u>Comment</u>	<u>Comment Date</u>
Engineer	SB 5NA WW + Elev diff=850+4880-4872=858' Logs 10/20/06 L-FH=BP Base UPA=1466' AQ Isolation (with 50' excess)=908'	01/02/2019
Permit	Ready to pass form. Confirmed as drilled lat/long is accurate. Final Form 5/Drilling Completion Report on file as doc# 1831067. Codell formation completion confirmed via Form 5A/Completed Interval Report(s): doc# 1831068. Confirmed Form 7 production reporting is accurate.	10/25/2018
Well File Verification	Pass	10/19/2018

Total: 3 comment(s)