

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:

401830088

Date Received:

11/07/2018

## 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: Montoya, John

Tel: (970) 397-4124

COGCC contact:

Email: john.montoya@state.co.us

API Number 05-123-12785-00

Well Name: BUDERUS

Well Number: 1-23

Location: QtrQtr: NENE Section: 23 Township: 5N Range: 65W Meridian: 6

County: WELD

Federal, Indian or State Lease Number: 67422

Field Name: WATTENBERG

Field Number: 90750

☒ Notice of Intent to Abandon☐ Subsequent Report of Abandonment

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

Latitude: 40.390000

Longitude: -104.623333

GPS Data:

Date of Measurement: 05/04/2010

PDOP Reading: 2.2

GPS Instrument Operator's Name: Chuck Kraft

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	6958	6968	11/16/2016	B PLUG CEMENT TOP	6900

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	272	200	272	0	VISU
1ST	7+7/8	3+1/2	9.2	7,075	190	7,075	6,080	CBL
S.C. 1.1				3,528	100	3,528	3,490	CALC
S.C. 1.2				607	300	640	0	CBL

## Plugging Procedure for Intent and Subsequent Report

CIBP #1: Depth 6593 with 2 sacks cmt on top. CIBP #2: Depth 6900 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 <u>20</u> sks cmt from <u>3730</u> ft. to <u>3290</u> ft.	Plug Type: <u>CASING</u>	Plug Tagged: <input type="checkbox"/>
Set <u>25</u> sks cmt from <u>563</u> ft. to <u>0</u> ft.	Plug Type: <u>CASING</u>	Plug Tagged: <input type="checkbox"/>
Set _____ sks cmt from _____ ft. to _____ ft.	Plug Type: _____	Plug Tagged: <input type="checkbox"/>
Set _____ sks cmt from _____ ft. to _____ ft.	Plug Type: _____	Plug Tagged: <input type="checkbox"/>
Set _____ sks cmt from _____ ft. to _____ ft.	Plug Type: _____	Plug Tagged: <input type="checkbox"/>

Perforate and squeeze at 1500 ft. with 258 sacks. Leave at least 100 ft. in casing 1215 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:

Buderus 1-23 (05-123-12785)/Plugging Procedure (Intent)

Producing Formation: Codell: 6958'-6968'

Upper Pierre Aquifer: 495'-1345'

TD: 7150' PBTD: 7045'

Surface Casing: 8 5/8" 24# @ 272' w/ 200 sxs

Production Casing: 3 1/2" 9.2# @ 7075' w/ 190 sxs cmt (TOC @ 6080' - CBL).

Cement squeeze @ 3528' w/ 100 sxs cmt (TOC @ 3490' - Estimated). Casing holes @ 3497'-3528'.

Annular fill cmt @ 629' w/ 300 sxs cmt (TOC @ Surface' - CBL).

Existing CIBP @ 6900' w/ 2 sxs cmt (11/16/2016).

Tubing: 2 1/16" tubing set @ 6633' (11/18/2016).

Proposed Procedure:

1. MIRU pulling unit. Pull 2 3/8" tubing.
2. RU wireline company.
3. Run CBL 4000'- surface to verify top of annular cement @ 3490'.
4. TIH with CIBP. Set BP @ 6593'. Top with 2 sxs 15.8#/gal CI G cement.
5. TIH with tubing to 3730'. RU cementing company. Mix and pump 20 sxs 15.8#/gal CI G cement down tubing (Casing Hole coverage from 3730'-3290'). TOOH with tubing.
6. TIH with perforation gun. Shoot lower squeeze holes at 1500' for Pierre Aquifer coverage. Shoot upper squeeze holes at 1200'.
7. Set CICR at 1215'. RU cementing company. Sting in and pump 248 sxs 15.8#/gal CI G cement. Sting out and pump 10 sxs on top of CICR.
8. Pick up tubing to 563'. Mix and pump 25 sxs 15.8#/gal CI G cement down tubing. Cement should circulate to surface.
9. 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: 11/7/2018 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.

COGCC Approved: Wolfe, Stephen Date: 11/30/2018

**CONDITIONS OF APPROVAL, IF ANY:** \_\_\_\_\_ Expiration Date: 5/29/2019

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, <a href="http://cogcc.state.co.us">cogcc.state.co.us</a>.<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>• COGCC Change: Tag CIBP set at 6900', if TOC is deeper than 6880' dump 2 sx of cement before proceeding with plugging operations.</li><li>• COGCC does not have a CBL on file that verifies the cement coverage from 3490-3528'. Operator will confirm cement coverage by CBL and submit with Form 5 SRA. If cement coverage is not as represented on this approved NOIA, operator will contact COGCC Engineer for revised plugging orders prior to continuing with plugging operations.</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

<u>Att Doc Num</u>	<u>Name</u>
401830088	FORM 6 INTENT SUBMITTED
401830094	WELLBORE DIAGRAM
401830095	WELLBORE DIAGRAM
401830097	GYRO SURVEY

Total Attach: 4 Files

### General Comments

<u>User Group</u>	<u>Comment</u>	<u>Comment Date</u>
Engineer	Added annular fill to casing table.	11/30/2018
Engineer	SB5 L-FH 271-89' WW 363'-96(1) Log L-FH BP, UPA 495-1345'	11/30/2018
Well File Verification	Pass	11/13/2018
Permit	Pass	11/08/2018

Total: 4 comment(s)