FORM 6 Rev 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

| DE | ET | OE | ES |
|---|---|---|---|
| | | | |

Document Number: 401637898

Date Received: 05/11/2018

## 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, COGCC contact:** Name: Gomez, Jason Tel: (970) 573-1277 Email: jason.gomez@state.co.us

API Number 05-123-25944-00

Well Name: BUTTERBALL Well Number: 14-19

Location: QtrQtr: SWSW Section: 19 Township: 3N Range: 64W Meridian: 6

County: WELD Federal, Indian or State Lease Number:

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: 40.205220 Longitude: -104.600470

GPS Data:

Date of Measurement: 09/18/2007 PDOP Reading: 2.7 GPS Instrument Operator's Name: HOLLY L. TRACY

Reason for Abandonment: ☐ Dry ☒ Production Sub-economic ☐ Mechanical Problems

☐ Other

Casing to be pulled: ☒ Yes ☐ No Estimated Depth: 1700

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 | 7031 | 7041 | | | |
| NIOBRARA | 6800 | 6813 | | | |

Total: 2 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 | 678 | 480 | 678 | 0 | VISU |
| 1ST | 7+7/8 | 4+1/2 | 10.5 | 7,191 | 140 | 7,191 | 5,900 | CBL |
| | | | Stage Tool | 4,700 | 238 | 4,700 | 4,020 | CBL |

# Plugging Procedure for Intent and Subsequent Report

CIBP #1: Depth 6750 with 2 sacks cmt on top. CIPB #2: Depth _____ with _____ sacks cmt on top.

CIBP #3: Depth _____ with _____ sacks cmt on top. CIPB #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 | 40 | sks cmt from | 5212 | ft. to | 4688 | ft. | Plug Type: | CASING | Plug Tagged: ☐ |
| Set | 255 | sks cmt from | 1825 | ft. to | 1400 | ft. | Plug Type: | STUB PLUG | Plug Tagged: ☐ |
| Set | 470 | sks cmt from | 900 | ft. to | 0 | ft. | Plug Type: | OPEN HOLE | 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. of _____ inch casing Plugging Date: _____

*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:

Butterball 14-19 (05-123-25944)/Plugging Procedure (Intent)
Producing Formation: Niobrara: 6800'-6813' Codell: 7031'-7041'
Upper Pierre Aquifer: 617'-1562'
TD: 7652' PBTD: 7165'
Surface Casing: 8 5/8" 24# @ 678' w/ 480 sxs
Production Casing: 4 1/2" 10.5# @ 7191' w/ 140 sxs cmt (TOC @ 5900' - CBL). DV Tool @ 4700' w/ 238 sxs cmt (TOC @ 4020' – CBL).

Tubing: 2 3/8" tubing set @ 7025' (4/24/2014).
Proposed Procedure:
1. MIRU pulling unit. Pull 2 3/8" tubing.
2. RU wireline company.
3. TIH with CIBP. Set BP at 6750'. Top with 2 sxs 15.8#/gal Cl G cement.
4. Run CBL from 4200' to Surface to confirm TOC @ 4020'. If TOC is higher than 1700', call engineer for further directions.
5. TIH with tubing to 5215'. RU cementing company. Mix and pump 40 sxs 15.8#/gal Cl G cement down tubing. TOOH with tubing.
6. TIH with casing cutter. Cut 4 ½" casing at 1700'. Pull cut casing.
7. TIH with tubing to 1825'. Mix and pump 255 sxs 15.8#/gal Cl G cement w/ 2% CaCl down tubing (coverage from 1825'-1400').
8. Pick up tubing to 900'. Mix and pump 470 sxs 15.8#/gal Cl 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: 5/11/2018 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: JENKINS, STEVE

Date: 6/20/2018

**CONDITIONS OF APPROVAL, IF ANY:**

Expiration Date: 12/19/2018

| COA Type | Description |
|---|---|
| | 1) Provide 48 hour notice of plugging MIRU via electronic Form 42.<br>2) Prior to placing the 900' plug: verify that all fluid migration (liquid or gas) has been eliminated. If evidence of fluid migration or pressure remains, contact COGCC Engineer for an update to plugging orders.<br>3) After isolation has been verified, pump plug and displace. If cement is not circulated to surface, shut-in, WOC 4 hours then tag plug – must be at 628' or shallower and provide 10 sx plug at the surface. Leave at least 100' of cement in the casing for each plug.<br>4) Properly abandon flowlines as per Rule 1103. File electronic Form 42 once abandonment is complete. |
| | 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. |
| | Prior to starting plugging operations a Bradenhead test shall be performed.<br>1) If, before opening the Bradenhead valve, the beginning pressure is greater than 25 psi, sampling is required.<br>2) If pressure remains at the conclusion of the test, or if any liquids were present during the test, sampling is required.<br>3) If sampling is required contact COGCC engineering for an confirmation of plugging requirements prior to placing any plugs.<br>Sampling shall comply with Operator Guidance - Bradenhead Testing and Reporting Instructions. The Form 17 shall be submitted within 10 days of the test. |

## Attachment Check List

| Att Doc Num | Name |
|---|---|
| 401637898 | FORM 6 INTENT SUBMITTED |
| 401637907 | WELLBORE DIAGRAM |
| 401637909 | WELLBORE DIAGRAM |
| 401637913 | GYRO SURVEY |

Total Attach: 4 Files

## General Comments

| User Group | Comment | Comment Date |
|---|---|---|
| Engineer | 1) Deepest Water Well within 1 mile = 560'.<br>2) Fox Hills Bottom- 532', per SB5. | 06/20/2018 |
| Permit | Pass | 06/08/2018 |
| Well File Verification | Pass | 05/14/2018 |

Total: 3 comment(s)