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

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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: Evins, Bret Tel: (970) 420-6699 Email: bret.evins@state.co.us

API Number 05-123-25908-00

Well Name: WELLS RANCH Well Number: 11-10

Location: QtrQtr: NWNW Section: 10 Township: 5N Range: 63W 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: 40.419310 Longitude: -104.430190

GPS Data:

Date of Measurement: 09/29/2008 PDOP Reading: 2.0 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:

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	6688	6694	04/11/2017	BRIDGE PLUG	6463
NIOBRARA	6513	6526	04/11/2017	BRIDGE PLUG	6463

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	457	370	457	0	VISU
1ST	7+7/8	4+1/2	10.5	6,807	675	6,807	0	CBL

Plugging Procedure for Intent and Subsequent Report

CIBP #1: Depth 6361 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 60 sks cmt from 1800 ft. to 1100 ft. Plug Type: CASING Plug Tagged: ☐

Set 55 sks cmt from 657 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: ☐

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:

Wells Ranch 11-10 (05-123-25908)/Plugging Procedure (Intent)
Producing Formation: Codell: 6688'-6694' Niobrara: 6513'-6526'
Upper Pierre Aquifer: 480'-1530'
TD: 6850' PBTD: 6782.7'
Surface Casing: 8 5/8" 24# @ 457' w/ 370 sxs
Production Casing: 4 1/2" 10.5# @ 6806.7' w/ 675 sxs cmt (TOC @ Surface' - CBL).
Existing RBP @ 6463 w/ 2 sxs of sand (4/11/2017).

Tubing: 2 3/8" tubing set @ 6159.3' (4/11/2017).
Proposed Procedure:
1. Tag top of sand and cleanout to existing RBP @ 6463'.
2. Release RBP @ 6463'. TOOH 2 3/8" tubing with RBP.
3. RU wireline company.
4. TIH with CIBP. Set BP at 6463'. Top with 2 sxs 15.8#/gal Cl G cement.
5. TIH with tubing to 1800'. RU cementing company. Mix and pump 40 sxs 15.8#/gal Cl G cement down tubing (Pierre coverage from 1800'-1300').
6. Pickup tubing to 657'. Mix and pump 55 sxs 15.8#/gal Cl G cement down tubing. Cement should circulate to surface. TOOH with tubing.
7. 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: 8/8/2018 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: 9/6/2018

CONDITIONS OF APPROVAL, IF ANY: Expiration Date: 3/5/2019

COA Type	Description
	Venting 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.
	Bradenhead Testing • 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. • 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. 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 2) Pressure remains at the conclusion of the test, or 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. • Form 17 Bradenhead Test Report shall be submitted within 10 days of the test. • 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.
	Plugging • Provide 48 hour notice of plugging MIRU via electronic Form 42. • Plugs and squeezes will be placed as stated in the plugging procedure of the approved NOI unless prior approval from COGCC is obtained. • If there is any pressure on the surface casing during the pre-plugging bradenhead test operator must contact COGCC Engineer for revised plugging orders prior to proceeding with operations. • COGCC Change: Move CIBP w/ 2 sx from 6463’ to 6361’, 50’ above the top of the Niobrara. Pressure test casing and note on Form 6 SRA. • COGCC Change: Increase volume of plug at 1800’ and tag if circulation is not maintained during pumping and displacement to depth. Top of plug to be 1100’ or higher. • 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. • 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. • 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.

Attachment Check List

Att Doc Num	Name
401727278	FORM 6 INTENT SUBMITTED
401727286	WELLBORE DIAGRAM
401727287	WELLBORE DIAGRAM
401727288	GYRO SURVEY

Total Attach: 4 Files

General Comments

User Group	Comment	Comment Date
Engineer	SB5 NA L-FH WW 400' 29(2mi)	09/06/2018
Well File Verification	Pass	08/09/2018
Permit	Passed permit review	08/08/2018

Total: 3 comment(s)