

Document Number:
401854286

Date Received:
11/30/2018

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: Valerie Danson

Name of Operator: PDC ENERGY INC Phone: (970) 506-9272

Address: 1775 SHERMAN STREET - STE 3000 Fax: _____

City: DENVER State: CO Zip: 80203 Email: valerie.danson@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 05-123-14471-00 Well Number: 2 28A

Well Name: CHURCHILL

Location: QtrQtr: SWNW Section: 28 Township: 5N Range: 64W Meridian: 6

County: WELD Federal, Indian or State Lease Number: 69074

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: 40.371944 Longitude: -104.561667

GPS Data:
Date of Measurement: 05/12/2010 PDOP Reading: 2.4 GPS Instrument Operator's Name: Chuck Kraft

Reason for Abandonment: Dry Production Sub-economic Mechanical Problems
 Other _____

Casing to be pulled: Yes No Estimated Depth: 1500

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	6833	6853			
NIOBRARA	6650	6741			

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	324	170	324	0	VISU
1ST	7+7/8	3+1/2	9.3	6,943	225	6,943	6,147	CBL

Plugging Procedure for Intent and Subsequent Report

CIBP #1: Depth 6500 with 2 sacks cmt on top. CIBP #2: Depth _____ with _____ 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 100 sks cmt from 1615 ft. to 1450 ft. Plug Type: STUB PLUG Plug Tagged:
 Set 140 sks cmt from 1450 ft. to 1200 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:
 Set _____ sks cmt from _____ ft. to _____ ft. Plug Type: _____ Plug Tagged:

Perforate and squeeze at 4500 ft. with 190 sacks. Leave at least 100 ft. in casing 4115 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 335 sacks half in. half out surface casing from 524 ft. to 0 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:

Churchill 2 28A (05-123-14471)/Plugging Procedure (Intent)
 Producing Formation: Niobrara/Codell: 6650'-6853'
 Upper Pierre Aquifer: 328'-1387'
 TD: 6950' PBTD: 6881'
 Surface Casing: 8 5/8" 24# @ 324' w/ 170 sxs
 Production Casing: 3 1/2" 9.3# @ 6943' w/ 225 sxs cmt (TOC @ 6147' - CBL).

- Tubing: No tubing downhole.
 Proposed Procedure:
1. RU wireline company.
 2. TIH with CIBP. Set BP at 6600'. Top with 2 sxs 15.8#/gal CI G cement.
 3. TIH with perf gun. Shoot lower squeeze holes at 4500' and shoot upper squeeze holes at 4100' for Sussex coverage.
 4. Set CICR at 4115'. RU cementing company. Sting in and pump 190 sxs 15.8#/gal CI G cement. Sting out and pump 10 sxs on top of CICR.
 5. TIH with casing cutter. Cut 3 1/2" casing at 1500'. Pull cut casing.
 6. TIH with tubing to 1615'. Mix and pump 250 sxs 15.8#/gal CI G cement w/ 2% CaCl down tubing (Pierre aquifer coverage from 1615'-1200').
 7. Pick up tubing to 524'. Mix and pump 335 sxs 15.8#/gal CI G cement down tubing. Cement should circulate to surface.
 8. 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: Valerie Danson
 Title: Reg Tech Date: 11/30/2018 Email: valerie.danson@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: 2/20/2019

CONDITIONS OF APPROVAL, IF ANY: _____

Expiration Date: 8/19/2019

COA Type	Description
	<p>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.</p>
	<p>Bradenhead Testing</p> <ul style="list-style-type: none"> • 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. <ul style="list-style-type: none"> 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. Submit via a Form 43 to upload the laboratory results to the COGCC Environmental Database. Form 43 instructions are on COGCC's website under Regulation => Forms => Form 43 COGCC Environmental Database.
	<p>Plugging</p> <ul style="list-style-type: none"> • 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 revised by COA or prior approval from COGCC is obtained. • COGCC Change: move CIBP with 2 sx of cement from 6600' to 6500'. • Due to the history of surface casing pressure operator will wait 8 hrs to assure that there is no pressure or fluid flow after pumping squeeze at 4500' and before proceeding to cut casing and pump 1615-1200' stub plug. If pressure or flow remains after the squeeze, casing may be cut at a minimum of 1500' depth and the stub plug will be pumped from 1615-1450' (adjust for deeper cut to have 50' of cement above stub) and the well will be shut in for another 8 hrs and checked to assure that there is not any pressure or flow prior to pumping remaining plug to 1200'. Contact COGCC Area Engineer if well is not static at this point for revised plugging orders. • Tag stub plug if circulation is not maintained while pumping and displacing plug to depth. • 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 Area 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. • Tag required if the shoe plug, or combined stub/shoe plug, is not circulated to the surface. Shoe plug shall be placed as specified herein and the top of cement must be a minimum 50' into the shoe, or 50' above the stub (if not cut below the shoe), whichever is shallower. • 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. Confirm cement to surface in all strings during cut and cap and document in operations summary attached to the Form 6 SRA. • 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

<u>Att Doc Num</u>	<u>Name</u>
401854286	FORM 6 INTENT SUBMITTED
401854313	WELLBORE DIAGRAM
401854314	WELLBORE DIAGRAM

Total Attach: 3 Files

General Comments

<u>User Group</u>	<u>Comment</u>	<u>Comment Date</u>
Engineer	SB Laramie-Fox Hills 4478 4623 93.5 174 29 22.45 NNT Base L-FH + 50' = 174 + 50 = 224' WW + Elev diff + 50' = 105 + 4652 - 4690 + 50 = 117' Logs 10/19/84 123-11493 Base UPA 1380'	02/18/2019
Well File Verification	Pass	12/11/2018
Permit	Created seperate intervals for Nio and Codell on zones tab. Pass	12/03/2018

Total: 3 comment(s)