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401610574

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04/17/2018

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: Pesicka, Conor Tel: (970) 415-0789

COGCC contact: Email: conor.pesicka@state.co.us

API Number 05-123-23164-00

Well Name: WELLS RANCH Well Number: 43-27

Location: QtrQtr: NESE Section: 27 Township: 6N 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: 40.455190 Longitude: -104.416670

GPS Data:
Date of Measurement: 10/31/2006 PDOP Reading: 3.6 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	6834	6843			
NIOBRARA	6562	6672			

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	410	230	410	0	VISU
1ST	7+7/8	4+1/2	10.5	6,996	165	6,996	5,988	CBL
S.C. 1.1				5,988	300	5,988	2,575	CBL

Plugging Procedure for Intent and Subsequent Report

CIBP #1: Depth 6512 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 25 sks cmt from 1800 ft. to 1500 ft. Plug Type: CASING Plug Tagged:
Set 50 sks cmt from 650 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. _____ inch casing Plugging Date: _____
of _____
*Wireline Contractor: _____ *Cementing Contractor: _____
Type of Cement and Additives Used: _____
Flowline/Pipeline has been abandoned per Rule 1103 Yes No *ATTACH JOB SUMMARY

Technical Detail/Comments:

Wells Ranch 43-27 (05-123-23164)/Plugging Procedure (Intent)
Producing Formation: Niobrara: 6562'-6672' Codell: 6834'-6843'
Upper Pierre Aquifer: 590'-1680'
TD: 7043' PBTD: 6965'
Surface Casing: 8 5/8" 24# @ 410' w/ 230 sxs
Production Casing: 4 1/2" 10.5# @ 6996' w/ 465 sxs cmt (TOC @ 2590' - CBL). Annular fill w/ 460 sxs cmt (TOC @ Surface - CBL).
Tubing: 2 3/8" tubing set @ 6821' (12/6/2013).
Proposed Procedure:
1. MIRU pulling unit. Pull 2 3/8" tubing.
2. RU wireline company.
3. TIH with CIBP. Set BP at 6512'. Top with 2 sxs 15.8#/gal CI G cement.
4. TIH with tubing to 1800'. RU cementing company. Mix and pump 25 sxs 15.8#/gal CI G cement down tubing (cement coverage from 1500'-1800').
5. Pick up tubing to 650'. Mix and pump 50 sxs 15.8#/gal CI G cement down tubing. Cement should circulate to surface.
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: 4/17/2018 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: 10/26/2018

<u>COA Type</u>	<u>Description</u>
	Operator shall submit Form 5A to report current CODL interval from 6834-6843 (doesn't agree with previous 5A) and to report NBRR completion (never reported within 30 days).
	1) Provide 48 hour notice of plugging MIRU via electronic Form 42. 2) Prior to placing the 650' 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. 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 360' or shallower and provide 10 sx plug at the surface. Leave at least 100' of cement in the casing for each plug. 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. 1) If, before opening the Bradenhead valve, the beginning pressure is greater than 25 psi, sampling is required. 2) If pressure remains at the conclusion of the test, or if any liquids were present during the test, sampling is required. 3) If sampling is required contact COGCC engineering for an confirmation of plugging requirements prior to placing any plugs. 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

<u>Att Doc Num</u>	<u>Name</u>
401610574	FORM 6 INTENT SUBMITTED
401610583	WELLBORE DIAGRAM
401610587	WELLBORE DIAGRAM
401610588	CEMENT BOND LOG

Total Attach: 4 Files

General Comments

<u>User Group</u>	<u>Comment</u>	<u>Comment Date</u>
Engineer	WBD for proposed plugging is mis-labeled as actual but has the correct information.	04/27/2018
Permit	If operator confirms date of completion of NBRR, COGCC may be able to correct formation reported to combined NB-CD. Currently, reporting is only for CODL.	04/26/2018
Engineer	1) Deepest Water Well within 1 mile = 400'. 2) Fox Hills Bottom- N/A, per SB5.	04/26/2018
Well File Verification	Pass	04/20/2018

Total: 4 comment(s)