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401980130

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03/20/2019

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: Peterson, Tom Tel: (970) 370-1281

COGCC contact: Email: tom.peterson@state.co.us

API Number 05-123-25208-00

Well Name: BROWN Well Number: 22-20

Location: QtrQtr: SENW Section: 20 Township: 4N Range: 67W 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: 40.300190 Longitude: -104.916720

GPS Data:
Date of Measurement: 10/16/2007 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: _____

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	6963	7056			
NIOBRARA	72418	7260			

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	490	350	490	0	VISU
1ST	7+7/8	4+1/2	10.5	7,420	795	7,420	0	CBL

Plugging Procedure for Intent and Subsequent Report

CIBP #1: Depth 6913 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 40 sks cmt from 1500 ft. to 1000 ft. Plug Type: CASING Plug Tagged:
Set 55 sks cmt from 690 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 1105 Yes No *ATTACH JOB SUMMARY

Technical Detail/Comments:

Brown 22-20 (05-123-25208) Plugging Procedure (Intent)
Producing Formation: Niobrara/Codell: 6963'-7260'
Upper Pierre Aquifer: 250'-1290'
TD: 7434' PBTD: 7379.9'
Surface Casing: 8 5/8" 24# @ 490' w/ 350 sxs
Production Casing: 4 1/2" 10.5# @ 7420.8' w/ 795 sxs cmt (TOC @ surface' - CBL).
Tubing: 2 3/8" tubing set @ 7234.3' (9/29/2016).
Proposed Procedure:
1. MIRU pulling unit. Pull 2 3/8" tubing.
2. RU wireline company.
3. TIH with CIBP. Set BP at 6913'. Top with 2 sxs 15.8#/gal CI G cement.
4. TIH with tubing to 1500'. RU cementing company. Mix and pump 40 sxs 15.8#/gal CI G cement down tubing (Pierre coverage from 1500'-1000').
5. Pick up tubing to 690'. Mix and pump 55 sxs 15.8#/gal CI G cement down tubing. Cement should circulate to surface. TOO H with tubing.
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: Valerie Danson
Title: Reg Tech Date: 3/20/2019 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.

CONDITIONS OF APPROVAL, IF ANY:

Expiration Date: 10/1/2019

COA Type	Description
	<p>If there has not been a reported Bradenhead test within 60 days of plugging this well, prior to starting plugging operations, a Bradenhead test shall be performed.</p> <p>1) If, before opening the Bradenhead valve, the beginning pressure is greater than 25 psi, sampling is required.</p> <p>2) If pressure remains at the conclusion of the test, or if any liquids were present during the test, sampling is required.</p> <p>3) If sampling is required contact COGCC engineering for a confirmation of plugging requirements prior to placing any plugs.</p> <p>Sampling shall comply with Operator Guidance - Bradenhead Testing and Reporting Instructions.</p> <p>The Form 17 shall be submitted within 10 days of the test.</p>
	<p>1) Provide 48 hour notice of plugging MIRU via electronic Form 42.</p> <p>2) Prior to placing the 690' 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.</p> <p>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 440' or shallower and provide 10 sack plug at surface.</p> <p>4) Leave at least 100' of cement in the wellbore for each plug.</p> <p>5) Properly abandon on-location flowlines as per Rule 1105. File electronic Form 42 once abandonment is 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.</p>
	<p>Operator shall implement measures to control venting, to protect health and safety, and to ensure that vapors and odors from well plugging operations do not constitute a nuisance or hazard to public welfare.</p>

Attachment Check List

Att Doc Num	Name
401980130	FORM 6 INTENT SUBMITTED
401980140	WELLBORE DIAGRAM
401980141	WELLBORE DIAGRAM

Total Attach: 3 Files

General Comments

User Group	Comment	Comment Date
Engineer	Deepest Water Well within 1 1/2 Miles – 300' SB5 Base of Fox Hills - N/A	04/02/2019
Permit	Ready to pass form. Confirmed as drilled lat/long is accurate. Final Form 5/Drilling Completion Report on file as doc# 1989419. Niobrara-Codell formation completion confirmed via Form 5A/Completed Interval Report(s): doc# 1989421. Confirmed Form 7 production reporting is accurate.	04/01/2019
Well File Verification	Pass	03/26/2019

Total: 3 comment(s)