

FORM  
6Rev  
11/20

# 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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Document Number:

402951872

Date Received:

02/09/2022

## 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: Evins, Bret

Tel: (970) 420-6699

**COGCC contact:**

Email: bret.evins@state.co.us

Type of Well Abandonment Report: ☒ Notice of Intent to Abandon ☐ Subsequent Report of Abandonment

API Number 05-123-20372-00

Well Name: NATIONAL HOG FARM

Well Number: 32-21

Location: QtrQtr: SWNE Section: 21 Township: 5N Range: 63W Meridian: 6

County: WELD

Federal, Indian or State Lease Number:

Field Name: WATTENBERG

Field Number: 90750

### Only Complete the Following Background Information for Intent to Abandon

Latitude: 40.386750

Longitude: -104.438030

GPS Data: GPS Quality Value: 2.1 Type of GPS Quality Value: PDOP Date of Measurement: 09/26/2007

Reason for Abandonment: ☐ Dry ☒ Production Sub-economic ☐ Mechanical Problems☐ OtherCasing to be pulled: ☒ Yes ☐ No Estimated Depth: 2500Fish in Hole: ☐ Yes ☒ No If yes, explain details belowWellbore 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
J SAND	7033	7043			
DAKOTA	7317	7327	05/07/2002	BRIDGE PLUG	7250

Total: 2 zone(s)

### Casing History

Casing Type	Size of Hole	Size of Casing	Grade	Wt/Ft	Csg/Liner Top	Setting Depth	Sacks Cmt	Cmt Btm	Cmt Top	Status
SURF	12+1/4	8+5/8	J55	24	0	455	320	455	0	VISU
1ST	7+7/8	4+1/2	J55	10.5	0	7476	250	7476	5762	CBL
S.C. 1.1						5300	270	5300	2836	CBL

### Plugging Procedure for Intent and Subsequent Report

CIBP #1: Depth 7250 with \_\_\_\_\_ sacks cmt on top. CIBP #2: Depth 6983 with 2 sacks cmt on top.  
CIBP #3: Depth 6230 with 2 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 4 sks cmt from 7250 ft. to 7224 ft. Plug Type: CASING Plug Tagged: ☐  
Set 100 sks cmt from 2550 ft. to 2300 ft. Plug Type: STUB PLUG Plug Tagged: ☐  
Set 100 sks cmt from 1460 ft. to 1260 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 237 sacks half in. half out surface casing from 655 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. of \_\_\_\_\_ inch casing Number of Days from Setting Surface Plug to Capping or Sealing the Well: \_\_\_\_\_  
Surface Plug Setting Date: \_\_\_\_\_ Cut and Cap Date: \_\_\_\_\_

\*Wireline Contractor: \_\_\_\_\_ \*Cementing Contractor: \_\_\_\_\_

Type of Cement and Additives Used: \_\_\_\_\_

Flowline/Pipeline has been abandoned per Rule 1105 ☐ Yes ☐ No

Technical Detail/Comments:

National Hog Farm 32-21 (05-123-20372)/Plugging Procedure (Intent)  
Producing Formation: J-Sand: 7033'-7043'  
Abandoned Formation: Dakota: 7317'-7327'  
Upper Pierre Aquifer: 350'-1360'  
TD: 7550' PBTD: 7100' (5/10/2002)  
Surface Casing: 8 5/8" 24# @ 455' w/ 320 sxs cmt  
Production Casing: 4 1/2" 10.5# @ 7476' w/ 250 sxs cmt (TOC @ 5762' - CBL)  
S.C.C.1. @ 5300' w/ 270 sxs cmt (TOC @ 2836' - CBL)  
Possible Existing CIBP @ 7250' (5/7/2002)

Tubing: 2 3/8" tubing set @ 7024' (5/10/2002)

Proposed Procedure:

1. MIRU pulling unit. Pull 2 3/8" tubing.
2. RU wireline company. TIH and tag Possible Existing CIBP @ 7250', document depth. (Top of Dakota perms @ 7317')
3. RIH w/ dump bailer, dump 4 sxs 15.8#/gal CI G cement on top Existing CIBP @ 7250'.
4. TIH with CIBP. Set BP at 6983'. Top with 2 sxs 15.8#/gal CI G cement. (Top of J Sand perms @ 7033')
5. TIH with CIBP. Set BP at 6230'. Top with 2 sxs 15.8#/gal CI G cement. (Top of Niobrara @ 6280')
6. TIH with casing cutter. Cut 4 1/2" casing @ 2500'. Pull cut casing.
7. TIH with tubing to 2550'. RU cementing company. Mix and pump 100 sxs 15.8#/gal CI G cement down tubing. (Stub plug from 2550'-2300')
8. Wait a sufficient time to confirm static conditions. If at any time after placing this plug there is evidence of pressure or fluid migration, contact engineering before continuing operations.
9. TIH with tubing to 1460'. Mix and pump 100 sxs 15.8#/gal CI G cement down tubing. (Pierre coverage from 1460'-1260')
10. Pick up with tubing to 655'. Mix and pump 237 sxs 15.8#/gal CI G cement down tubing. Cement should circulate to surface.
11. Well casing cut and capped per COGCC guidelines at a depth as not to interfere with soil cultivation.

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 Analyst Date: 2/9/2022 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: McFarland, Nick Date: 2/22/2022

**CONDITIONS OF APPROVAL, IF ANY:** \_\_\_\_\_ Expiration Date: 8/21/2022

## Condition of Approval

### COA Type

### Description

	<p>1) Provide electronic Form 42 Notice of MIRU 2 business days ahead of operations and electronic Form 42 Notice of Plugging Operations 48 hours prior to mobilizing for plugging operations.</p> <p>2) Operator must tag and confirm existing Dakota plug. If not present, a new plug must be placed.</p> <p>3) After placing the shallowest hydrocarbon isolating plug (6230'), operator must wait a sufficient time to confirm static conditions.</p> <p>4) After placing plug at 2550' assure that all fluid migration has been eliminated by monitoring the well for a minimum of 8 hours before proceeding to the next plug. If at any time after placing this plug there is evidence of pressure or of fluid migration, contact COGCC engineering before continuing operations.</p> <p>5) Prior to placing the 1460' 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>6) After isolation has been verified, pump plug at 655' and displace. If cement is not circulated to surface, shut-in, WOC 4 hours then tag plug – must be at 405' or shallower and provide at least 10 sx plug at the surface.</p> <p>7) Leave at least 100' of cement in the wellbore for each plug.</p> <p>8) Properly abandon flowlines as per Rule 1105. Pursuant to Rule 911.a. Closure of Oil and Gas Facilities, Operator will submit Site Investigation and Remediation Workplans via Form 27 for COGCC prior approval before cutting and capping the plugged well, conducting flowline abandonment, and removing production equipment. Pursuant to Rule 1105.f. Abandonment Verification, within 90 days of an operator completing abandonment requirements for a flowline or crude oil transfer line, an operator must submit a Field Operations Notice, Form 42-Abandonment of Flowlines for on-location flowlines, and a Flowline Report, Form 44, for off-location flowlines or crude oil transfer lines.</p> <p>9) With the Form 6 SRA operator must provide written documentation which positively affirms each COA has been addressed.</p>
	<p>Prior to starting plugging operations a bradenhead test shall be performed if there has not been a reported bradenhead test within the 60 days immediately preceding the start of plugging operations.</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>The Form 17 shall be submitted within 10 days of the test. Sampling shall comply with Operator Guidance - Bradenhead Testing and Reporting Instructions. 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.</p> <p>If there is a need for sampling, contact COGCC engineering for verification of plugging procedure.</p>
	<p>Submit a form 5A to confirm the status and depth of the CIBP set over the Dakota completion and to report the full information for the J-Sand completion. Include a wireline ticket. This Form 5A must be submitted within 30 days after plugging operations are completed for compliance with Rule 416.</p>
	<p>Submit corrected Operator's Monthly Production Reports (Form 7) required for compliance with Rule 413 within 30 days after plugging operations are completed.</p>
	<p>Operator will implement measures to capture, combust, or control emissions 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 health, welfare and the environment.</p>

5 COAs

### Attachment List

<u>Att Doc Num</u>	<u>Name</u>
402951872	FORM 6 INTENT SUBMITTED
402951951	WELLBORE DIAGRAM
402951952	WELLBORE DIAGRAM
402951953	OPERATIONS SUMMARY

Total Attach: 4 Files

### General Comments

<u>User Group</u>	<u>Comment</u>	<u>Comment Date</u>
Engineer	Most recent bradenhead test 10/26/21 - 1 psi. Producing as of December 2021.  SB5 Base of Fox Hills: 202'  Deepest Water Well Within One Mile: 400' Number of Wells: 5  Deepest Water Well Within 1.5 Miles: 400' Number of Wells: 22  Production within one mile: JSND, CODL, NBRR	02/22/2022
Permit	Added COAs per internal communication and emails with operator. Permitting review complete.	02/16/2022
Permit	Verified as-drilled GPS. Verified perf zones via attached Ops Report. Production reporting absent for JSand; production indicated for Dakota likely incorrect.	02/11/2022
Permit	Per email communication with the operator, due to an incomplete well file, the actual depth and status of the CIBP over the Dakota is not currently known and will have to be confirmed during plugging operations. The completion of the JSand and its production were never reported to COGCC, and correction of the Form 7 reporting is complicated by the unknown status of the Dakota.	02/11/2022

Total: 4 comment(s)