

Document Number:  
402584957

Date Received:  
01/27/2021

**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: Serna, Abe Tel: (720) 661-7317  
 Email: abe.serna@state.co.us  
**COGCC contact:** \_\_\_\_\_

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

API Number 05-123-14479-00 Well Name: RIGGS Well Number: 34-16  
 Location: QtrQtr: SWSE Section: 16 Township: 6N Range: 65W Meridian: 6  
 County: WELD Federal, Indian or State Lease Number: 55994  
 Field Name: GREELEY Field Number: 32760

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

Latitude: 40.480690 Longitude: -104.665360  
 GPS Data: GPS Quality Value: 1.7 Type of GPS Quality Value: PDOP Date of Measurement: 08/25/2006

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

Casing to be pulled:  Yes  No Estimated Depth: 1560  
 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
NIOBRARA-FT HAYS-CODELL	6821	7126			

Total: 1 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	318	175	318	0	VISU
1ST	7+7/8	4+1/2	J55	11.6	0	7278	250	7278	6288	CBL
S.C. 1.1						4558	100	4558	4368	CBL

## Plugging Procedure for Intent and Subsequent Report

CIBP #1: Depth 6771 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 <u>33</u> sks cmt from <u>4558</u> ft. to <u>4368</u> ft.	Plug Type: <u>CASING</u>	Plug Tagged: <input type="checkbox"/>
Set <u>10</u> sks cmt from <u>3424</u> ft. to <u>3293</u> ft.	Plug Type: <u>CASING</u>	Plug Tagged: <input type="checkbox"/>
Set <u>100</u> sks cmt from <u>1610</u> ft. to <u>1360</u> ft.	Plug Type: <u>STUB PLUG</u>	Plug Tagged: <input type="checkbox"/>
Set _____ sks cmt from _____ ft. to _____ ft.	Plug Type: _____	Plug Tagged: <input type="checkbox"/>
Set _____ sks cmt from _____ ft. to _____ ft.	Plug Type: _____	Plug Tagged: <input type="checkbox"/>

Perforate and squeeze at 3610 ft. with 76 sacks. Leave at least 100 ft. in casing 3425 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 225 sacks half in. half out surface casing from 550 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:

Riggs 34-16 (05-123-14479)/Plugging Procedure (Intent)  
 Producing Formation: Niobrara/Ft Hays/Codell: 6821'-7126'  
 Upper Pierre Aquifer: 450'-1460'  
 TD: 7278' PBTD: 7183' (1/24/13)  
 Surface Casing: 8 5/8" 24# @ 318' w/ 175 sxs cmt  
 Production Casing: 4 1/2" 11.6# @ 7278' w/ 250 sxs cmt (TOC @ 6288' - CBL)  
 Remedial Casing Squeeze @ 4558' w/ 100 sxs cmt (TOC @ 4368' - CBL)

Tubing: 2 3/8" tubing set @ 7099' (1/24/13)  
 Proposed Procedure:  
 1. MIRU pulling unit. Pull 2 3/8" tubing.  
 2. RU wireline company  
 3. TIH with CIBP. Set BP at 6771'. Top with 2 sxs 15.8#/gal CI G cement. (Top of Nio perms @ 6821')  
 4. TIH with tubing to 4558'. RU cementing company. Mix and pump 33 sxs 15.8#/gal CI G cement down tubing. (Remedial Casing Coverage from 4558'-4368')  
 5. TIH with perf gun. Shoot lower squeeze holes at 3610' and upper squeeze holes at 3410'.  
 6. TIH with CICR. Set CICR at 3425'. RU cementing company. Sting in and pump 86 sxs 15.8#/gal CI G cement. Sting out and leave 10 sxs (of the 86 sxs) cement on top of CICR. (Top of Parkman @ 3660')  
 7. TIH with casing cutter. Cut 4 1/2" casing @ 1560'. Pull cut casing.  
 8. TIH with tubing to 1610'. RU cementing company. Mix and pump 100 sxs 15.8#/gal CI G cement down tubing. (Stub Plug and Pierre coverage from 1610'-1360')  
 9. 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.  
 10. Pick up tubing to 550'. Mix and pump 225 sxs 15.8#/gal CI G cement down tubing. Cement should circulate to surface.  
 11. 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: 1/27/2021 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: JENKINS, STEVE Date: 2/8/2021

**CONDITIONS OF APPROVAL, IF ANY:** Expiration Date: 8/7/2021

COA Type	Description
	<p>1) Provide 2 business days notice of plugging MIRU via electronic Form 42.</p> <p>2) Prior to placing the 550' 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 268' or shallower and provide 10 sx plug at the surface.</p> <p>4) Leave at least 100' of cement in the wellbore for each plug.</p> <p>5) Properly abandon flowlines per Rule 1105. File electronic Form 42 once abandonment of on-location flowlines is complete. Within 90 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>6) With the Form 6 SRA operator must provide written documentation which positively affirms each COA has been addressed.</p> <p>7) After placing the shallowest hydrocarbon isolating plug (1610'), operator must 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 COGCC engineering before continuing operations.</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>
	<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>Verify existing cement coverage by CBL - submit to COGCC for verification of plugging orders prior to continuing plugging operations.</p>
	<p>Submit corrected Operator's Monthly Production Reports (Form 7) required for compliance with Rule 413 within 30 days: 12/1999-present, correct CODL/NB-CD to NBFHC</p>

## Attachment List

<u>Att Doc Num</u>	<u>Name</u>
402584957	FORM 6 INTENT SUBMITTED
402584980	WELLBORE DIAGRAM
402584982	WELLBORE DIAGRAM

Total Attach: 3 Files

## General Comments

<u>User Group</u>	<u>Comment</u>	<u>Comment Date</u>
Engineer	1) Deepest Water Well within 1 mile = 400'. 2) Fox Hills Bottom- N/A, per SB5.	02/08/2021
Engineer	In accordance with the Notice to Operators (NTO): Timing for COGCC Forms adopted on 05/01/2020, this Form 6 Notice of Intent to Abandon is valid for 12 months from the date of approval expiring on 2/08/2022. This NTO does not alter the deadlines for submission of, or compliance with any other Commission rule or Form.	02/08/2021
Permit	Verified as-drilled GPS. Verified perf zones. Production reporting for NB-CD/CODL and per operator/old ops summary should have been NBFHC. COA placed for correction of production reporting. PDC took possession of the well effective 12/1999 per doc# 949576. Permitting review complete.	01/28/2021

Total: 3 comment(s)