FORM 6 Rev 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: 402966032

Date Received: 02/25/2022

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, COGCC contact: Name: Evins, Bret Tel: (970) 420-6699 Email: bret.evins@state.co.us

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

API Number 05-123-13326-00

Well Name: HOWARD Well Number: 8-27

Location: QtrQtr: SENE Section: 27 Township: 6N Range: 64W Meridian: 6

County: WELD Federal, Indian or State Lease Number: 57586

Field Name: WATTENBERG Field Number: 90750

Only Complete the Following Background Information for Intent to Abandon

Latitude: 40.458853 Longitude: -104.529113

GPS Data: GPS Quality Value: 1.9 Type of GPS Quality Value: PDOP Date of Measurement: 05/31/2012

Reason for Abandonment: ☐ Dry ☐ Production Sub-economic ☐ Mechanical Problems

☒ Other Emergency P&A due to a compromised tubing head

Casing to be pulled: ☒ Yes ☐ No Estimated Depth: 1700

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	6876	6890			
NIOBRARA	6589	6717			

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	312	210	312	0	VISU
1ST	7+7/8	4+1/2	J55	15.1	0	6984	230	7001	6034	CBL

Plugging Procedure for Intent and Subsequent Report

CIBP #1: Depth 6539 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 10 sks cmt from 3399 ft. to 3250 ft. Plug Type: CASING Plug Tagged: ☐

Set 100 sks cmt from 1750 ft. to 1500 ft. Plug Type: STUB PLUG 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 3575 ft. with 90 sacks. Leave at least 100 ft. in casing 3400 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 596 sacks half in. half out surface casing from 850 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

Surface Plug Setting Date: _____ Cut and Cap Date: _____ Number of Days from Setting Surface Plug to Capping or Sealing the Well: _____

*Wireline Contractor: _____ *Cementing Contractor: _____

Type of Cement and Additives Used: _____

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

Technical Detail/Comments:

Howard 8-27 (05-123-13326) / Plugging Procedure (Intent)
Producing Formations: Niobrara/Codell: 6589'-6890'

Upper Pierre Aquifer: 560'-1600'

Parkman: 3625'

Deepest Water Well: 800'
TD: 7041' PBTD: 7001' (3/19/1987)
Surface Casing: 8 5/8" 24# @ 312' w/ 210 sxs cmt
Production Casing: 4 1/2" 15.1# @ 6984' w/ 230 sxs (TOC @ 6034' – CBL)

Tubing: 2 3/8" tubing @ 6574' (8/12/11)
Proposed Procedure:
1. MIRU pulling unit. Pull 2 3/8" tubing.
2. RU wireline company.
3. TIH with CIBP. Set BP at 6539'. Top with 2 sxs 15.8#/gal Cl G cement. (Top of Nio perfs @ 6589')
4. TIH with perf gun. Shoot lower squeeze holes at 3575' and upper squeeze holes at 3375'.
5. TIH with CICR. Set CICR at 3400'. RU cementing company. Sting in and pump 100 sxs 15.8#/gal Cl G cement. Sting out and leave 10 sxs (of the 100 sxs) cement on top of CICR. (Top of Parkman @ 3625')
6. 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.
7. TIH with casing cutter. Cut 4 1/2" casing @ 1700'. Pull cut casing.
8. TIH with tubing to 1750'. Mix and pump 100 sxs 15.8#/gal Cl G cement down tubing. (Stub Plug Coverage from 1750'-1500')
9. Pick up with tubing to 850'. Mix and pump 596 sxs 15.8#/gal Cl G cement down tubing. Cement should circulate to surface.
10. 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: 2/25/2022 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: JENKINS, STEVE Date: 2/25/2022

CONDITIONS OF APPROVAL, IF ANY: Expiration Date: 8/24/2022

Condition of Approval

COA Type	Description
	1) Provide 2 business day notice of plugging MIRU via electronic Form 42, and provide 48 hours Notice of Plugging Operations, prior to mobilizing for plugging operations via electronic Form 42. These are 2 separate notifications, required by Rules 408.e and 408.I. 2) After placing the shallowest hydrocarbon isolating plug (1750'), operator must wait a sufficient time to confirm static conditions. If at any time after placing this plug there is evidence of pressure or of fluid migration, contact COGCC engineering before continuing operations. 3) Prior to placing the 850' plug: verify that all fluid migration (liquid and gas) has been eliminated. If evidence of fluid migration or pressure remains, contact COGCC Engineer for an update to plugging orders. 4) 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 262' or shallower and provide 10 sx plug at the surface. 5) Leave at least 100' of cement in the wellbore for each plug. 6) 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. 7) With the Form 6 SRA operator must provide written documentation which positively affirms each COA has been addressed.
	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. 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. 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.
	Due to close proximity to Residential Building Units: prior to commencing operations, at a minimum, the operator will provide an informational sheet to the owners/occupants of BUs that are nearby and adjacent to the parcel on which the well is located. The sheet will include the operator's contact information and the nature, timing, and expected duration of the PA operations.
	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. Due to proximity of building units (BUs) all blowdown gases will be controlled.
4 COAs	

Attachment List

Att Doc Num	Name
402966032	FORM 6 INTENT SUBMITTED
402966194	WELLBORE DIAGRAM
402966195	WELLBORE DIAGRAM

Total Attach: 3 Files

General Comments

User Group	Comment	Comment Date
Permit	•Per Doc#400313652 separated formations to provide the top for the Codell and the Bottom of the Niobrara. •Permitting review complete and task passed.	02/25/2022
Engineer	1) Deepest Water Well within 1 mile = 800'. 2) Fox Hills Bottom- N/A, per SB5.	02/25/2022

Total: 2 comment(s)