

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:

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Date Received:

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:

Tel:

COGCC contact:

Email:

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

API Number 05-123-23073-00

Well Name: HOWARD LAKE

Well Number: 21-9

Location: QtrQtr: NENW Section: 9 Township: 6N Range: 64W 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: 40.505750

Longitude: -104.557780

GPS Data: GPS Quality Value: 1.6 Type of GPS Quality Value: Date of Measurement: 06/27/2010

Reason for Abandonment: ☐ Dry ☐ Production Sub-economic ☐ Mechanical Problems☐ OtherCasing to be pulled: ☐ Yes ☐ No Estimated Depth:Fish 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
CODELL	7113	7121	12/19/2020	B PLUG CEMENT TOP	7063

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	540	300	540	0	VISU
1ST	7+7/8	4+1/2	J55	10.5	0	7264	155	7264	6294	CBL
S.C. 1.1						6294	331	6294	2230	CBL

Plugging Procedure for Intent and Subsequent Report

CIBP #1: Depth 7063 with 2 sacks cmt on top. CIBP #2: Depth 6700 with 2 sacks cmt on top.
 CIBP #3: Depth 2500 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 100 sks cmt from 1874 ft. to 1600 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: ☐
 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 396 sacks half in. half out surface casing from 752 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: 1800 ft. of 4+1/2 inch casing Number of Days from Setting Surface Plug to Capping or Sealing the Well: 10
 Surface Plug Setting Date: 12/21/2020 Cut and Cap Date: 12/31/2020

*Wireline Contractor: Rocky Mtn Wireline Services *Cementing Contractor: NexTier Cementing Services

Type of Cement and Additives Used: Class G 15.8 PPG Cement

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

Technical Detail/Comments:

Howard Lake 21-9 (05-123-23073) Plugging Procedure
 Producing Formation: Codell: 7113'-7121'

Upper Pierre Aquifer: 650'-1700'
 TD: 7290' PBD: 7200' (4/18/2014)
 Surface Casing: 8 5/8" 24# @ 540' w/ 300 sxs
 Production Casing: 4 1/2" 10.5# @ 7264' w/ 486 sxs cmt (TOC @ 2230' - CBL)

Procedure:

1. MIRU pulling unit. Pull 2 3/8" tubing.
2. RU wireline company.
3. TIH with CIBP. Set BP at 7063'. Top with 2 sxs 15.8#/gal CI G cement. (Top of Codell perms @ 7113').
4. TIH with CIBP. Set BP at 6700'. Top with 2 sxs 15.8#/gal CI G cement. (Top of Nio @ 6750')
5. TIH with CIBP. Set BP at 2500'. Top with 2 sxs 15.8#/gal CI G cement.
6. Run a Strip Log from 2100' to Surface (for casing cut verification, log not kept).
7. TIH with casing cutter. Cut 4 1/2" casing at 1800'. Pull cut casing.
8. TIH with tubing to 1874'. RU cementing company. Mix and pump 100 sxs 15.8#/gal CI G cement down tubing. (Stub plug and Pierre coverage from 1850'-1600'). TOC at 1600'.
9. Pick up tubing to 752'. Mix and pump 396 sxs 15.8#/gal CI G cement down tubing. Cement circulate to surface.
10. 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: _____

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: _____

Date: _____

CONDITIONS OF APPROVAL, IF ANY:

<u>COA Type</u>	<u>Description</u>
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Attachment List

<u>Att Doc Num</u>	<u>Name</u>
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402583373	CEMENT JOB SUMMARY
402583374	OPERATIONS SUMMARY
402583376	WELLBORE DIAGRAM

Total Attach: 3 Files

General Comments

<u>User Group</u>	<u>Comment</u>
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Comment Date

		Stamp Upon Approval
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Total: 0 comment(s)