

FORM
6Rev
12/05

State of Colorado

Oil and Gas Conservation Commission

1120 Lincoln Street, Suite 801, Denver, Colorado 80203 Phone: (303) 894-2100 Fax: (303) 894-2109



DE ET OE ES

Document Number:

401471696

Date Received:

11/30/2017

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: Jenifer Hakkarinen

Name of Operator: PDC ENERGY INC

Phone: (303) 8605800

Address: 1775 SHERMAN STREET - STE 3000

Fax:

City: DENVER State: CO Zip: 80203

Email: Jenifer.Hakkarinen@pdce.com

For "Intent" 24 hour notice required,

Name: Peterson, Tom

Tel: (303) 815-9641

COGCC contact:

Email: tom.peterson@state.co.us

API Number 05-123-19905-00

Well Name: LHI

Well Number: 31-23

Location: QtrQtr: NWNE Section: 23 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: 40.303440

Longitude: -104.855890

GPS Data:

Date of Measurement: 07/15/2010

PDOP Reading: 1.7

GPS Instrument Operator's Name: Holly L. Tracy

Reason for Abandonment: ☐ Dry☒ Production Sub-economic☐ Mechanical Problems☐ OtherCasing to be pulled: ☒ Yes☐ No

Estimated Depth: 650

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	7262	7272			

Total: 1 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	402	280	402	0	VISU
1ST	7+7/8	4+1/2	10.5	7,434	140	7,434	6,572	CBL

Plugging Procedure for Intent and Subsequent Report

CIBP #1: Depth 7212 with 2 sacks cmt on top. CIBP #2: Depth 6881 with 2 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 425 sks cmt from 700 ft. to 0 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 _____ 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 1103 ☐ Yes ☐ No *ATTACH JOB SUMMARY

Technical Detail/Comments:

LHI 31-23 (05-123-19905)/Plugging Procedure (Intent)
Producing Formation (Perforations): Codell: 7262'-7272'
TD: 7461' PBD: 7416'
Surface Casing: 8 5/8" 24# @ 402' w/ 280 sxs
Production Casing: 4 1/2" 10.5# @ 7434' w/ 140 sxs cmt (TOC @ 6565' - CBL).

Tubing: 2 3/8" tubing set @ 7251' (11/8/2001).

Proposed Procedure:

1. MIRU pulling unit. Pull 2 3/8" tubing.
 2. RU wireline company.
 3. TIH with CIBP. Set BP at 7212'. Top with 2 sxs 15.8#/gal CI G cement.
 4. TIH with CIBP. Set BP at 6881'. Top with 2 sxs 15.8#/gal CI G cement.
 5. TIH with casing cutter. Cut 4 1/2" casing at 650'. Pull cut casing.
 6. TIH with tubing to 700'. RU cementing company. Mix and pump 425 sxs 15.8#/gal CI G cement down tubing. Cement should circulate to surface.
 7. Cut surface casing 6' below ground level and weld on cap.
- If there is bradenhead pressure:
1. MIRU pulling unit. Pull 2 3/8" tubing.
 2. RU wireline company.
 3. TIH with CIBP. Set BP at 7212'. Top with 2 sxs 15.8#/gal CI G cement.
 4. TIH with CIBP. Set BP at 6881'. Top with 2 sxs 15.8#/gal CI G cement.
 5. TIH with casing cutter. Cut 4 1/2" casing at 1500'. Pull cut casing.
 6. TIH with tubing to 1550'. RU cementing company. Mix and pump 75 sxs 15.8#/gal CI G cement down tubing. Wait 8 hours or overnight. Check to see if there is any bradenhead pressure or fluid flow after stub plug is set. If there is, contact COGCC for further guidance. If there is not, move on to the next step.
 7. TIH with tubing to 650'. RU cementing company. Mix and pump 475 sxs 15.8#/gal CI G cement down tubing. Cement should circulate to surface.
 8. 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: Jenifer Hakkarinen
Title: Reg Tech Date: 11/30/2017 Email: JEnifer.Hakkarinen@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: 12/21/2017

CONDITIONS OF APPROVAL, IF ANY: _____

Expiration Date: 6/20/2018

COA Type	Description
	<p>1) Provide 48 hour notice of plugging MIRU via electronic Form 42.</p> <p>2) Prior to placing the 700' 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 352' or shallower and provide 10 sx plug at the surface. Leave at least 100' of cement in the casing for each plug.</p> <p>4) Properly abandon flowlines as per Rule 1103. File electronic Form 42 once abandonment is complete.</p>
	Operator shall implement measures to control unnecessary and excessive venting, to protect the health and safety of the public, and to ensure that vapors and odors from well plugging operations do not constitute a nuisance or hazard to public welfare.
	<p>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 an confirmation of plugging requirements prior to placing any plugs.</p> <p>Sampling shall comply with Operator Guidance - Bradenhead Testing and Reporting Instructions. The Form 17 shall be submitted within 10 days of the test.</p>

Attachment Check List

Att Doc Num	Name
401471696	FORM 6 INTENT SUBMITTED
401471701	WELLBORE DIAGRAM
401471703	WELLBORE DIAGRAM

Total Attach: 3 Files

General Comments

User Group	Comment	Comment Date
Engineer	<p>1) Deepest Water Well within 1 mile = 47'.</p> <p>2) Fox Hills Bottom- 219', per SB5.</p>	12/21/2017
Public Room	Document verification complete 12/12/17	12/12/2017
Permit	Pass.	12/07/2017

Total: 3 comment(s)