

Document Number:
401539832

Date Received:
07/25/2018

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: O'Donnell, Shaun Tel: (720) 305-8280
 COGCC contact: Email: shaun.odonnell@state.co.us

API Number 05-123-23691-00 Well Number: 5
 Well Name: LOHR
 Location: QtrQtr: NWNE Section: 13 Township: 5N Range: 64W 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: 40.403333 Longitude: -104.494444
 GPS Data:
 Date of Measurement: 12/09/2009 PDOP Reading: 1.7 GPS Instrument Operator's Name: Brandon Lucason
 Reason for Abandonment: Dry Production Sub-economic Mechanical Problems
 Other _____
 Casing to be pulled: Yes No Estimated Depth: _____
 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	6372	6484			
CODELL	6652	6666	02/12/2007	B PLUG CEMENT TOP	6524

Total: 2 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	416	330	416	0	VISU
1ST	7+7/8	4+1/2	11.6	6,800	600	6,800	0	CBL

Plugging Procedure for Intent and Subsequent Report

CIBP #1: Depth 6322 with 2 sacks cmt on top. CIBP #2: Depth 6524 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 20 sks cmt from 2750 ft. to 2500 ft. Plug Type: CASING Plug Tagged:
 Set 50 sks cmt from 650 ft. to 0 ft. Plug Type: CASING 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 1105 Yes No *ATTACH JOB SUMMARY

Technical Detail/Comments:

Lohr 5 (05-123-23691)/Plugging Procedure (Intent)
 Producing Formation: Niobrara: 6372'-6484' Codell: 6652'-6666'
 Upper Pierre Aquifer: 2600'-2650'
 TD: 6815' PBTD: 6765'
 Surface Casing: 8 5/8" 24# @ 416' w/ 330 sxs
 Production Casing: 4 1/2" 11.6# @ 6800' w/ 600 sxs cmt (TOC @ Surface' - CBL). Existing CIBP @ 6524' w/ 2 sxs cmt.
 Tubing: 2 3/8" tubing set @ 6351' (2/26/2007).
 Proposed Procedure:
 1. MIRU pulling unit. Pull 2 3/8" tubing.
 2. RU wireline company.
 3. TIH with CIBP. Set BP at 6322'. Top with 2 sxs 15.8#/gal CI G cement.
 4. TIH with tubing to 2750'. RU cementing company. Mix and pump 20 sxs 15.8#/gal CI G cement down tubing.
 5. Pick up tubing to 650'. Mix and pump 50 sxs 15.8#/gal CI G cement down tubing. Cement should circulate to surface.
 6. 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: Production Tech Date: 7/25/2018 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: Wolfe, Stephen Date: 9/12/2018

COA Type	Description
	<p>Venting 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>
	<p>Bradenhead Testing</p> <ul style="list-style-type: none"> • Prior to the start of plugging operations, a bradenhead test shall be performed and reported if there has not been a reported bradenhead test within the 60 days immediately preceding the start of plugging operations. • If any of the following conditions exist then sampling of all fluids is required and sampling methods shall comply with Operator Guidance – Bradenhead Testing and Reporting Instructions, Appendix A: Liquid and Gas Sampling as found on the COGCC website, cogcc.state.co.us. <ol style="list-style-type: none"> 1) The initial pressure measurement on the bradenhead is greater than 25 psi, prior to blowing down any liquid or gas from the bradenhead valve, or 2) Pressure remains at the conclusion of the test, or 3) Any liquids are present anytime during the test. If so, then stop the test as soon as liquids are present and sample before resuming the test. • Form 17 Bradenhead Test Report shall be submitted within 10 days of the test. • 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>Plugging</p> <ul style="list-style-type: none"> • Provide 48 hour notice of plugging MIRU via electronic Form 42. • Plugs and squeezes will be placed as stated in the plugging procedure of the approved NOI or revised by COA unless prior approval from COGCC is obtained. • Tag top of cement on CIBP at 6524'. If depth is greater than 6500' add 2 sx of cement to the plug before continuing with plugging operations. • Tag top of 2750-2500' plug if circulation is not maintained while pumping and displacing plug to depth, minimum plug height required is 100'. • Check for fluid migration or shut-in pressure on the well prior to pumping any plug (open hole, annular or casing) that isolates deepest aquifer or the surface casing shoe (whichever is deeper). Contact COGCC Engineer for revised plugging orders if well is not static at this time, prior to continuing with plugging operations. • Place a 50' plug (minimum) at the surface, both inside the inner most casing and in all annular spaces. All other cement plugs, without mechanical isolation, shall have at least 100' of cement left in the casing. • Properly abandon on-location flowlines as per Rule 1105. File electronic Form 42 once abandonment complete. Within 30 days of an operator completing abandonment requirements for an off-location
	<p>COA: Submit Operator's Monthly Production Reports (Form 7) required for compliance with Rule 309 within 30 days. CODL was producing until 2/2007 & NBRR wasn't frac'd until 2/2007</p>
	<p>COA: Reported "as drilled" GPS data is inaccurate. Submit accurate "as drilled" GPS data on Subsequent Report of Abandonment. GPS data must meet the requirements of Rule 215.</p>

Attachment Check List

Att Doc Num	Name
401539832	FORM 6 INTENT SUBMITTED
401539848	WELLBORE DIAGRAM
401539850	WELLBORE DIAGRAM
401539851	GYRO SURVEY

Total Attach: 4 Files

General Comments

<u>User Group</u>	<u>Comment</u>	<u>Comment Date</u>
Engineer	SB5 101-92' L-FH WW 105' 42	09/12/2018
Engineer	Base of Upper Pierre Aquifer appears to be 1340' on the DIL for this well.	09/12/2018
Permit	perf/prod intvls verified in doc #s 1320245 & 1631977 Passed permit review	08/02/2018
Well File Verification	Pass	07/30/2018
Permit	Returned to draft per operators request.	02/08/2018

Total: 5 comment(s)