

Document Number:  
401904543

Date Received:  
01/15/2019

**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: Silver, Randy Tel: (720) 827-6688  
 COGCC contact: Email: randy.silver@state.co.us

API Number 05-123-25207-00 Well Name: WASTE MANAGEMENT Well Number: 21-26  
 Location: QtrQtr: NENW Section: 26 Township: 3N 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: 40.202060 Longitude: -104.520640  
 GPS Data:  
 Date of Measurement: 09/13/2007 PDOP Reading: 3.3 GPS Instrument Operator's Name: HOLLY L. TRACY  
 Reason for Abandonment:  Dry  Production Sub-economic  Mechanical Problems  
 Other \_\_\_\_\_  
 Casing to be pulled:  Yes  No Estimated Depth: 1800  
 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
J SAND	7433	7476			

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	720	400	720	0	VISU
1ST	7+7/8	4+1/2	10.5	7,600	225	7,600	6,429	CBL
			Stage Tool	4,852	250	4,852	4,084	CBL

## Plugging Procedure for Intent and Subsequent Report

CIBP #1: Depth 7383 with 2 sacks cmt on top. CIBP #2: Depth 6628 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 40 sks cmt from 5100 ft. to 4600 ft. Plug Type: CASING Plug Tagged:   
 Set 255 sks cmt from 1915 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 \_\_\_\_\_ 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 460 sacks half in. half out surface casing from 920 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. \_\_\_\_\_ 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:

Waste Management 21-26 (05-123-25207) Plugging Procedure (Intent)  
 Producing Formation: J-Sand: 7433'-7476'  
 Upper Pierre Aquifer: 920'-1680'  
 TD: 7626' PBTD: 7575'  
 Surface Casing: 8 5/8" 24# @ 720' w/ 400 sxs  
 Production Casing: 4 1/2" 10.5# @ 7600' w/ 225 sxs cmt (TOC @ 6429' - CBL).  
 DV Tool @ 4850' w/ 225 sxs cmt (4852' - 4084' - CBL).

Tubing: 2 3/8" tubing set @ 7417' (10/4/2007).  
 Proposed Procedure:  
 1. MIRU pulling unit. Pull 2 3/8" tubing.  
 2. RU wireline company.  
 3. TIH with CIBP. Set BP at 7383'. Top with 2 sxs 15.8#/gal CI G cement.  
 4. TIH with CIBP. Set BP at 6628'. Top with 2 sxs 15.8#/gal CI G cement.  
 5. TIH with tubing to 5100'. Mix and pump 40 sxs 15.8#/gal CI G cement down tubing (DV Tool coverage from 5100'-4600'). TOOH with tubing.  
 6. TIH with casing cutter. Cut 4 1/2" casing at 1800'. Pull cut casing.  
 7. TIH with tubing to 1915'. Mix and pump 255 sxs 15.8#/gal CI G cement w/ 2% CaCl down tubing (Pierre coverage from 1915'-1500').  
 8. Pick up tubing to 920'. Mix and pump 460 sxs 15.8#/gal CI G cement down tubing. Cement should circulate to surface. TOOH with tubing.  
 9. 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

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: 4/15/2019

**CONDITIONS OF APPROVAL, IF ANY:**

Expiration Date: 10/14/2019

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"> <li>• 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.</li> <li>• 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"> <li>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</li> <li>2) Pressure remains at the conclusion of the test, or</li> <li>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.</li> </ol> </li> <li>• Form 17 Bradenhead Test Report shall be submitted within 10 days of the test.</li> <li>• 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. Submit via a Form 43 to upload the laboratory results to the COGCC Environmental Database. Form 43 instructions are on COGCC's website under Regulation =&gt; Forms =&gt; Form 43 COGCC Environmental Database.</li> </ul>
	<p>Plugging</p> <ul style="list-style-type: none"> <li>• Provide 48 hour notice of plugging MIRU via electronic Form 42.</li> <li>• Plugs and squeezes will be placed as stated in the plugging procedure of the approved NOI unless revised by COA or prior approval from COGCC is obtained.</li> <li>• If there is Bradenhead pressure reported on the pre-plugging Form 17 operator will contact COGCC Area Engineer for revised plugging orders prior to proceeding with plugging operations.</li> <li>• COGCC Change: Increase casing plug at 5100-4600' to 5100-4250' for DV and Sussex isolation, adjust cement volume accordingly.</li> <li>• Tag 1915-1500' plug if circulation is not maintained during pumping and displacement of plug to depth, 100' minimum height required.</li> <li>• 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.</li> <li>• Tag required if the shoe plug, or combined stub/shoe plug, is not circulated to the surface. Shoe plug shall be placed as specified herein and the top of cement must be a minimum 50' into the shoe, or 50' above the stub (if not cut below the shoe), whichever is shallower.</li> <li>• 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.</li> <li>• 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 flowline or crude oil transfer line the operator must submit a Flowline Report, Form 44.</li> <li>• Document all COAs have been satisfied on Form 6 SRA.</li> </ul>

## Attachment Check List

<u>Att Doc Num</u>	<u>Name</u>
401904543	FORM 6 INTENT SUBMITTED
401904559	WELLBORE DIAGRAM
401904562	WELLBORE DIAGRAM
401904563	GYRO SURVEY

Total Attach: 4 Files

## General Comments

<u>User Group</u>	<u>Comment</u>	<u>Comment Date</u>
Engineer	SB 5 Laramie-Fox Hills 4198 4553 163.8 642 287 39.31 NT Base L-FH + 50' = 642+50 = 692' WW + Elev diff =75 +4840 - 4887 + 50 = 78' Logs 7/7/07 Base UPA 1680'	04/15/2019
Well File Verification	Pass	01/22/2019
Permit	Pass	01/15/2019

Total: 3 comment(s)