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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 05-123-20347-00

Well Name: HAHN Well Number: 13-27

Location: QtrQtr: NWSW Section: 27 Township: 5N 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: 40.368330 Longitude: -104.885860

GPS Data:
Date of Measurement: 03/15/2007 PDOP Reading: 2.5 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: 3000

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	7145	7153			

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	375	265	375	0	VISU
1ST	7+7/8	4+1/2	10.5	7,254	136	7,254	6,380	CBL
S.C. 1.1				7,254	94	6,380	5,425	CBL
S.C. 1.2				7,254		5,425	4,322	CBL

Plugging Procedure for Intent and Subsequent Report

CIBP #1: Depth 7095 with 2 sacks cmt on top. CIBP #2: Depth 6772 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 <u>60</u> sks cmt from <u>3125</u> ft. to <u>2900</u> ft.	Plug Type: <u>STUB PLUG</u>	Plug Tagged: <input checked="" type="checkbox"/>
Set <u>150</u> sks cmt from <u>2650</u> ft. to <u>2350</u> ft.	Plug Type: <u>OPEN HOLE</u>	Plug Tagged: <input type="checkbox"/>
Set <u>475</u> sks cmt from <u>600</u> ft. to <u>0</u> ft.	Plug Type: <u>OPEN HOLE</u>	Plug Tagged: <input type="checkbox"/>
Set _____ sks cmt from _____ ft. to _____ ft.	Plug Type: _____	Plug Tagged: <input type="checkbox"/>
Set _____ sks cmt from _____ ft. to _____ ft.	Plug Type: _____	Plug Tagged: <input type="checkbox"/>

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:

Hahn 13-27 (05-123-20347)/Plugging Procedure (Intent)
 Producing Formation: Codell: 7145'-7153'
 Upper Pierre Aquifer: 2454'-2548'
 TD: 7260' PBTD: 7225'
 Surface Casing: 8 5/8" 24# @ 375' w/ 265 sxs
 Production Casing: 4 1/2" 10.5# @ 7254' w/ 363 sxs cmt (TOC @ 4324' - CBL).

 Tubing: 2 3/8" tubing set @ 7134' (11/12/2001).
 Proposed Procedure:
 1. MIRU pulling unit. Pull 2 3/8" tubing.
 2. RU wireline company.
 3. TIH with CIBP. Set BP at 7095'. Top with 2 sxs 15.8#/gal CI G cement.
 4. TIH with CIBP. Set BP at 6772'. Top with 2 sxs 15.8#/gal CI G cement.
 5. TIH with casing cutter. Cut 4 1/2" casing at 3000'. Pull cut casing.
 6. TIH with tubing to 3125'. RU cementing company. Mix and pump 60 sxs 15.8#/gal CI G cement with 2% CaCl down tubing.
 7. Pick up tubing to 2650'. Mix and pump 150 sxs 15.8#/gal CI G cement down tubing.
 8. Pick up tubing to 600'. Mix and pump 475 sxs 15.8#/gal CI G cement down tubing. Cement should circulate to surface.
 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: Jenifer Hakkarinen
 Title: Reg Tech Date: 1/30/2018 Email: Jenifer.Hakkarinen@pdce.com

