

FORM
5A

Rev
06/12

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:

10/16/2019

COMPLETED INTERVAL REPORT

The completed interval Report, Form 5A, shall be submitted within thirty (30) days of completing a formation (successful or not), when a formation is temporarily abandoned or permanently abandoned, for a recompletion, reperforation or restimulation, or when a formation is commingled. Fill out a section for each formation. Attach as many pages as required to fully describe the work. List in order of completion.

1. OGCC Operator Number: 69175

2. Name of Operator: PDC ENERGY INC

3. Address: 1775 SHERMAN STREET - STE 3000

City: DENVER State: CO Zip: 80203

4. Contact Name: Cassie Gonzalez

Phone: (303) 860-5800

Fax:

Email: Cassie.Gonzalez@pdce.com

5. API Number 05-123-37128-00

7. Well Name: Thornton

8. Location: QtrQtr: NWSW Section: 21 Township: 7N Range: 66W Meridian: 6

9. Field Name: WATTENBERG Field Code: 90750

6. County: WELD

Well Number: 21K-443

Completed Interval

FORMATION: CODELL-FORT HAYS		Status: PRODUCING		Treatment Type: FRACTURE STIMULATION	
Treatment Date: 11/06/2013		End Date: 11/07/2013		Date of First Production this formation: 11/15/2013	
Perforations	Top: 7968	Bottom: 12433	No. Holes:	Hole size:	

Provide a brief summary of the formation treatment: _____ Open Hole: ☒

16 Stage Sliding Sleeve, Swell Packer set at 7,968'
 Total Fluid: 59,466 bbls
 Gel Fluid: 47,198 bbls
 Slickwater Fluid: 12,268 bbls
 Total Proppant: 3,686,660 lbs
 Silica Proppant: 3,686,660 lbs
 Method for determining flowback: measuring flowback tank volumes.

This formation is commingled with another formation: ☐ Yes ☒ No

Total fluid used in treatment (bbl): 59466	Max pressure during treatment (psi): 4386
Total gas used in treatment (mcf): _____	Fluid density at initial fracture (lbs/gal): 8.34
Type of gas used in treatment: _____	Min frac gradient (psi/ft): 0.98
Total acid used in treatment (bbl): _____	Number of staged intervals: 16
Recycled water used in treatment (bbl): _____	Flowback volume recovered (bbl): 9401
Fresh water used in treatment (bbl): 59466	Disposition method for flowback: DISPOSAL
Total proppant used (lbs): 3686660	Rule 805 green completion techniques were utilized: <input checked="" type="checkbox"/>

Reason why green completion not utilized: _____

Fracture stimulations must be reported on FracFocus.org

Test Information:

Date: 12/08/2013	Hours: 24	Bbl oil: 172	Mcf Gas: 164	Bbl H2O: 68
Calculated 24 hour rate:	Bbl oil: 172	Mcf Gas: 164	Bbl H2O: 68	GOR: 953
Test Method: Flowing	Casing PSI: 1146	Tubing PSI: 704	Choke Size: 16/64	
Gas Disposition: SOLD	Gas Type: WET	Btu Gas: 1253	API Gravity Oil: 44	
Tubing Size: 2 + 3/8	Tubing Setting Depth: 7581	Tbg setting date: 11/12/2013	Packer Depth: _____	

Reason for Non-Production:

Date formation Abandoned: _____ Squeeze: ☐ Yes ☐ No If yes, number of sacks cmt _____

** Bridge Plug Depth: _____ ** Sacks cement on top: _____ ** Wireline and Cement Job Summary must be attached.

FORMATION: CODELL		Status: COMMINGLED		Treatment Type: _____	
Treatment Date: _____		End Date: _____		Date of First Production this formation: _____	
Perforations	Top: 8146	Bottom: 12433	No. Holes: _____	Hole size: _____	
Provide a brief summary of the formation treatment:			Open Hole: <input checked="" type="checkbox"/>		
Completed Depths: 8,146'-10,084' 10,936'-12,433'					
This formation is commingled with another formation:			<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		
Total fluid used in treatment (bbl): _____		Max pressure during treatment (psi): _____			
Total gas used in treatment (mcf): _____		Fluid density at initial fracture (lbs/gal): _____			
Type of gas used in treatment: _____		Min frac gradient (psi/ft): _____			
Total acid used in treatment (bbl): _____		Number of staged intervals: _____			
Recycled water used in treatment (bbl): _____		Flowback volume recovered (bbl): _____			
Fresh water used in treatment (bbl): _____		Disposition method for flowback: _____			
Total proppant used (lbs): _____		Rule 805 green completion techniques were utilized: <input type="checkbox"/>			
Reason why green completion not utilized: _____					
Fracture stimulations must be reported on FracFocus.org					
<u>Test Information:</u>					
Date: _____	Hours: _____	Bbl oil: _____	Mcf Gas: _____	Bbl H2O: _____	
Calculated 24 hour rate: _____	Bbl oil: _____	Mcf Gas: _____	Bbl H2O: _____	GOR: _____	
Test Method: _____	Casing PSI: _____	Tubing PSI: _____	Choke Size: _____		
Gas Disposition: _____	Gas Type: _____	Btu Gas: _____	API Gravity Oil: _____		
Tubing Size: _____	Tubing Setting Depth: _____	Tbg setting date: _____	Packer Depth: _____		
Reason for Non-Production: <div style="border: 1px solid black; height: 20px; width: 100%;"></div>					
Date formation Abandoned: _____	Squeeze: <input type="checkbox"/> Yes <input type="checkbox"/> No	If yes, number of sacks cmt _____			
** Bridge Plug Depth: _____	** Sacks cement on top: _____	** Wireline and Cement Job Summary must be attached.			

FORMATION: FORT HAYS Status: COMMINGLED Treatment Type: _____
Treatment Date: _____ End Date: _____ Date of First Production this formation: _____
Perforations Top: 7968 Bottom: 10936 No. Holes: _____ Hole size: _____
Provide a brief summary of the formation treatment: _____ Open Hole: ☒

Completed Depths: 7,968'-8,146' 10,084'-10,936'

This formation is commingled with another formation: ☒ Yes ☐ No

Total fluid used in treatment (bbl): _____

Max pressure during treatment (psi): _____

Total gas used in treatment (mcf): _____

Fluid density at initial fracture (lbs/gal): _____

Type of gas used in treatment: _____

Min frac gradient (psi/ft): _____

Total acid used in treatment (bbl): _____

Number of staged intervals: _____

Recycled water used in treatment (bbl): _____

Flowback volume recovered (bbl): _____

Fresh water used in treatment (bbl): _____

Disposition method for flowback: _____

Total proppant used (lbs): _____

Rule 805 green completion techniques were utilized: ☐

Reason why green completion not utilized: _____

Fracture stimulations must be reported on FracFocus.org

Test Information:

Date: _____ Hours: _____ Bbl oil: _____ Mcf Gas: _____ Bbl H2O: _____

Calculated 24 hour rate: _____ Bbl oil: _____ Mcf Gas: _____ Bbl H2O: _____ GOR: _____

Test Method: _____ Casing PSI: _____ Tubing PSI: _____ Choke Size: _____

Gas Disposition: _____ Gas Type: _____ Btu Gas: _____ API Gravity Oil: _____

Tubing Size: _____ Tubing Setting Depth: _____ Tbg setting date: _____ Packer Depth: _____

Reason for Non-Production: _____

Date formation Abandoned: _____ Squeeze: ☐ Yes ☐ No If yes, number of sacks cmt _____

** Bridge Plug Depth: _____ ** Sacks cement on top: _____ ** Wireline and Cement Job Summary must be attached.

Comment: _____

I hereby certify all statements made in this form are, to the best of my knowledge, true, correct, and complete.

Signed: _____ Print Name: Cassie Gonzalez

Title: Regulatory Technician Date: 10/16/2019 Email: Cassie.Gonzalez@pdce.com

Attachment Check List

Att Doc Num

Name

400561080 FORM 5A SUBMITTED

Total Attach: 1 Files

General Comments

<u>User Group</u>	<u>Comment</u>	<u>Comment Date</u>
Permit	Permit review complete.	11/12/2019
Permit	Returned to draft for AOC settlement.	09/15/2016
Permit	Uncemented sliding sleeve liner completion is open hole. Made that correction and removed data from 'no. holes' and 'hole size' fields. Corrected GOR. Perfs are above the top of the Codell. Asked for clarification.	04/25/2014

Total: 3 comment(s)