

FORM 5A

Rev 06/12

State of Colorado

Oil and Gas Conservation Commission

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Date Received:

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: 10531  
 2. Name of Operator: VANGUARD OPERATING LLC  
 3. Address: 5847 SAN FELIPE #3000  
 City: HOUSTON State: TX Zip: 77057  
 4. Contact Name: Scott Ghan  
 Phone: (970) 876-1959  
 Fax:  
 Email: sgghan@vnrenergy.com

5. API Number 05-045-23497-00  
 6. County: GARFIELD  
 7. Well Name: CSF  
 Well Number: 41B-4-791  
 8. Location: QtrQtr: SESW Section: 33 Township: 6S Range: 91W Meridian: 6  
 9. Field Name: MAMM CREEK Field Code: 52500

Completed Interval

FORMATION: ROLLINS Status: COMMINGLED Treatment Type: FRACTURE STIMULATION

Treatment Date: 05/24/2018 End Date: 06/04/2018 Date of First Production this formation: 06/08/2018

Perforations Top: 8323 Bottom: 8399 No. Holes: 33 Hole size: 0.37

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

Rollins treatment was commingled with Williams Fork-Cameo

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.

FORMATION: WILLIAMS FORK - CAMEO Status: COMMINGLED Treatment Type: FRACTURE STIMULATION

Treatment Date: 05/24/2018 End Date: 06/04/2018 Date of First Production this formation: 06/08/2018

Perforations Top: 6176 Bottom: 8315 No. Holes: 327 Hole size: 0.37

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

Williams Fork- Cameo treatment is commingled with Rollins

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.

FORMATION: WILLIAMS FK-ROLLINS-CAMEO Status: PRODUCING Treatment Type: FRACTURE STIMULATION

Treatment Date: 05/24/2018 End Date: 06/04/2018 Date of First Production this formation: 06/07/2018

Perforations Top: 6176 Bottom: 8399 No. Holes: 360 Hole size: 0.37

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

Williams Fork-Rollins-Cameo frac'd with: 73,527 bbls Slurry, 47,009 bbls Recycled, 850,000 lbs 40/70 sand, 151,500 lbs Resin.

This formation is commingled with another formation:  Yes  No

Total fluid used in treatment (bbl): 120536 Max pressure during treatment (psi): 5490

Total gas used in treatment (mcf): Fluid density at initial fracture (lbs/gal): 8.92

Type of gas used in treatment: Min frac gradient (psi/ft): 0.77

Total acid used in treatment (bbl): Number of staged intervals: 8

Recycled water used in treatment (bbl): 47009 Flowback volume recovered (bbl): 37148

Fresh water used in treatment (bbl): 73527 Disposition method for flowback: RECYCLE

Total proppant used (lbs): 1001500 Rule 805 green completion techniques were utilized:

Reason why green completion not utilized:

Fracture stimulations must be reported on FracFocus.org

Test Information:

Date: 06/26/2018 Hours: 24 Bbl oil: 11 Mcf Gas: 1170 Bbl H2O: 906

Calculated 24 hour rate: Bbl oil: 11 Mcf Gas: 1170 Bbl H2O: 906 GOR: 10636

Test Method: flowing Casing PSI: 463 Tubing PSI: 917 Choke Size: 32

Gas Disposition: SOLD Gas Type: WET Btu Gas: 1196 API Gravity Oil: 52

Tubing Size: 2 + 3/8 Tubing Setting Depth: 6079 Tbg setting date: 06/08/2017 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: Julie Webb

Title: Sr. Regulatory Analyst Date: Email Jwebb@progressivepcs.net

Attachment Check List

Table with columns Att Doc Num and Name

Total Attach: 0 Files

General Comments

Table with columns User Group, Comment, Comment Date, Stamp Upon Approval

Total: 0 comment(s)