

FORM 5A

Rev 06/12

State of Colorado Oil and Gas Conservation Commission

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Table with columns DE, ET, OE, ES

Document Number: 401568904

Date Received: 03/21/2018

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 05-045-23533-00
6. County: GARFIELD
7. Well Name: Federal GGU
Well Number: 24C-28-691
8. Location: QtrQtr: SWSW Section: 28 Township: 6S Range: 91W Meridian: 6
9. Field Name: MAMM CREEK Field Code: 52500

Completed Interval

FORMATION: ROLLINS Status: PRODUCING Treatment Type: FRACTURE STIMULATION

Treatment Date: 01/20/2018 End Date: 02/13/2018 Date of First Production this formation: 03/03/2018

Perforations Top: 7448 Bottom: 7545 No. Holes: 27 Hole size: 0.37

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

Rollins is commingled with Williams Fork

This formation is commingled with another formation: [X] Yes [ ] No

Total fluid used in treatment (bbl):
Total gas used in treatment (mcf):
Type of gas used in treatment:
Total acid used in treatment (bbl):
Recycled water used in treatment (bbl):
Fresh water used in treatment (bbl):
Total proppant used (lbs):
Max pressure during treatment (psi):
Fluid density at initial fracture (lbs/gal):
Min frac gradient (psi/ft):
Number of staged intervals:
Flowback volume recovered (bbl):
Disposition method for flowback:
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: 2 + 3/8 Tubing Setting Depth: 6534 Tbg setting date: 03/03/2018 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: PRODUCING Treatment Type: FRACTURE STIMULATION

Treatment Date: 01/20/2018 End Date: 02/13/2018 Date of First Production this formation: 03/03/2018

Perforations Top: 5028 Bottom: 7413 No. Holes: 333 Hole size: 0.37

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

Williams Fork 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: 2 + 3/8 Tubing Setting Depth: 6534 Tbg setting date: 03/03/2018 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: COMMINGLED Treatment Type: FRACTURE STIMULATION

Treatment Date: 01/20/2018 End Date: 02/13/2018 Date of First Production this formation: 03/03/2018

Perforations Top: 5028 Bottom: 7545 No. Holes: 360 Hole size: 0.37

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

Williams Fork- Rollins frac'd with 74,993 bbls slurry, 104,846 bbls recycled water, 1,275,000 lbs 40/70 sand, and 226,125 lbs resin

This formation is commingled with another formation:  Yes  No

Total fluid used in treatment (bbl): 179839 Max pressure during treatment (psi): 4880

Total gas used in treatment (mcf): 0 Fluid density at initial fracture (lbs/gal): 8.92

Type of gas used in treatment: Min frac gradient (psi/ft): 0.73

Total acid used in treatment (bbl): 0 Number of staged intervals: 8

Recycled water used in treatment (bbl): 104846 Flowback volume recovered (bbl): 22958

Fresh water used in treatment (bbl): 74993 Disposition method for flowback: RECYCLE

Total proppant used (lbs): 1501125 Rule 805 green completion techniques were utilized:

Reason why green completion not utilized:

Fracture stimulations must be reported on FracFocus.org

Test Information:

Date: 03/14/2018 Hours: 24 Bbl oil: 22 Mcf Gas: 1125 Bbl H2O: 1334

Calculated 24 hour rate: Bbl oil: 22 Mcf Gas: 1125 Bbl H2O: 1334 GOR: 51136

Test Method: Flowing Casing PSI: 451 Tubing PSI: 1490 Choke Size: 38/64

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

Tubing Size: 2 + 3/8 Tubing Setting Depth: 6534 Tbg setting date: 03/03/2018 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: 3/21/2018 Email: jwebb@progressivepcs.net

Attachment Check List

Table with 2 columns: Att Doc Num, Name. Row 1: 401568904, FORM 5A SUBMITTED

Total Attach: 1 Files

General Comments

User Group Comment Comment Date

Table with 3 columns: User Group, Comment, Comment Date. Row 1: Stamp Upon Approval

Total: 0 comment(s)