



FORMATION: CODELL Status: COMMINGLED Treatment Type: FRACTURE STIMULATION

Treatment Date: 11/12/2012 End Date: 11/12/2012 Date of First Production this formation: \_\_\_\_\_  
Perforations Top: 7186 Bottom: 7194 No. Holes: 24 Hole size: 16/64

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

(217,120 lbs Preferred Rock 20/40) (8,030 lbs SBXL 20/40). RD HES. MTP = 3027 psi, ATP = 2852 psi, AIR = 18.5 bpm. Pressure response was slightly positive for entire treatment.

This formation is commingled with another formation:  Yes  No

Total fluid used in treatment (bbl): 2674 Max pressure during treatment (psi): 3027

Total gas used in treatment (mcf): \_\_\_\_\_ Fluid density at initial fracture (lbs/gal): 8.36

Type of gas used in treatment: \_\_\_\_\_ Min frac gradient (psi/ft): 0.64

Total acid used in treatment (bbl): 119 Number of staged intervals: 1

Recycled water used in treatment (bbl): \_\_\_\_\_ Flowback volume recovered (bbl): \_\_\_\_\_

Fresh water used in treatment (bbl): 2555 Disposition method for flowback: DISPOSAL

Total proppant used (lbs): 225150 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: 7186 Tbg setting date: 01/17/2013 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: NIOBRARA-CODELL Status: PRODUCING Treatment Type: \_\_\_\_\_

Treatment Date: \_\_\_\_\_ End Date: \_\_\_\_\_ Date of First Production this formation: 01/17/2013

Perforations Top: 6876 Bottom: 7194 No. Holes: 54 Hole size: \_\_\_\_\_

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

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: DISPOSAL

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: 01/26/2012 Hours: 24 Bbl oil: 25 Mcf Gas: 56 Bbl H2O: 3

Calculated 24 hour rate: Bbl oil: 25 Mcf Gas: 56 Bbl H2O: 3 GOR: 2240

Test Method: Flowing Casing PSI: 1301 Tubing PSI: 673 Choke Size: 16/64

Gas Disposition: SOLD Gas Type: WET Btu Gas: 1215 API Gravity Oil: 52

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: NIORBARA Status: COMMINGLED Treatment Type: FRACTURE STIMULATION

Treatment Date: \_\_\_\_\_ End Date: \_\_\_\_\_ Date of First Production this formation: \_\_\_\_\_  
Perforations Top: 6876 Bottom: 6994 No. Holes: 28 Hole size: 27/64

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

Niobrara "A" Bench @ 6,876'-6,880' (2 SPF) Niobrara "B" Bench @ 6,990' - 6,994' (3 SPF) Niobrara "C" Bench @ 7,072'-7,076' (2 SPF) (237,900 lbs 20/40 Preferred Rock) (12,830 20/40 SB Excel. RD HES. MTP = 4,975 psi, ATP = 4,291 psi, AIR = 49.6 bpm. Pressure response was flat for entire treatment. "

This formation is commingled with another formation:  Yes  No

Total fluid used in treatment (bbl): 3726 Max pressure during treatment (psi): 4975  
Total gas used in treatment (mcf): \_\_\_\_\_ Fluid density at initial fracture (lbs/gal): 8.63  
Type of gas used in treatment: \_\_\_\_\_ Min frac gradient (psi/ft): 0.93  
Total acid used in treatment (bbl): \_\_\_\_\_ Number of staged intervals: 1  
Recycled water used in treatment (bbl): \_\_\_\_\_ Flowback volume recovered (bbl): \_\_\_\_\_  
Fresh water used in treatment (bbl): 3726 Disposition method for flowback: DISPOSAL  
Total proppant used (lbs): 250730 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: 7186 Tbg setting date: 01/17/2013 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.

Comment: \_\_\_\_\_

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: Regulatory Tech Date: \_\_\_\_\_ Email Jenifer.Hakkarinen@pdce.com

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