



FORMATION: CODELL Status: COMMINGLED Treatment Type: FRACTURE STIMULATION

Treatment Date: 07/21/2012 End Date: 08/21/2012 Date of First Production this formation: 10/12/2012

Perforations Top: 8268 Bottom: 8282 No. Holes: 42 Hole size: 0.42

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

Set CFP @ 8475'. 08-05-12  
 Frac'd the Codell 8,268' – 8,282' (42 holes) w/ 89,512 gal 22# pHaser Hybrid cross linked gel containing 251,881 # 30/50 sand 08-05-12

This formation is commingled with another formation:  Yes  No

Total fluid used in treatment (bbl): 2756 Max pressure during treatment (psi): 4399

Total gas used in treatment (mcf): \_\_\_\_\_ Fluid density at initial fracture (lbs/gal): 8.33

Type of gas used in treatment: \_\_\_\_\_ Min frac gradient (psi/ft): 0.43

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

Recycled water used in treatment (bbl): 2756 Flowback volume recovered (bbl): \_\_\_\_\_

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

Total proppant used (lbs): 251881 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: J-NIOBRARA-CODELL Status: COMMINGLED Treatment Type: \_\_\_\_\_

Treatment Date: \_\_\_\_\_ End Date: \_\_\_\_\_ Date of First Production this formation: 10/12/2012

Perforations Top: 7874 Bottom: 8702 No. Holes: 130 Hole size: 0.42

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

Set CBP @ 7830'. 08-19-12  
Drilled out CBP and CFP's to commingle the JSND-NBRR-CDL. 08-21-12

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: 10/13/2012 Hours: 24 Bbl oil: 85 Mcf Gas: 487 Bbl H2O: 135  
Calculated 24 hour rate: Bbl oil: 85 Mcf Gas: 487 Bbl H2O: 135 GOR: 5729  
Test Method: FLOWING Casing PSI: 1577 Tubing PSI: 736 Choke Size: 14/64  
Gas Disposition: SOLD Gas Type: DRY Btu Gas: 1207 API Gravity Oil: 52  
Tubing Size: 2 + 3/8 Tubing Setting Depth: 8671 Tbg setting date: 08/21/2012 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: J SAND Status: PRODUCING Treatment Type: FRACTURE STIMULATION

Treatment Date: 07/21/2012 End Date: 08/21/2012 Date of First Production this formation: 10/12/2012  
Perforations Top: 8686 Bottom: 8702 No. Holes: 48 Hole size: 0.42

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

Frac'd the J-Sand 8,686' – 8,702', (48 holes)w/ 65,564 gal 18 # pHaser Hybrid cross linked gel containing 252,350 # 20/40 Sand. 08-05-12

This formation is commingled with another formation:  Yes  No

Total fluid used in treatment (bbl): 3845 Max pressure during treatment (psi): 3384

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): 0.43

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

Recycled water used in treatment (bbl): 3845 Flowback volume recovered (bbl): \_\_\_\_\_

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

Total proppant used (lbs): 252699 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: NIOBRARA-CODELL Status: PRODUCING Treatment Type: \_\_\_\_\_

Treatment Date: \_\_\_\_\_ End Date: \_\_\_\_\_ Date of First Production this formation: 10/12/2012

Perforations Top: 7874 Bottom: 8282 No. Holes: 82 Hole size: 0.42

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: \_\_\_\_\_

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: NIOBRARA Status: COMMINGLED Treatment Type: FRACTURE STIMULATION

Treatment Date: 07/21/2012 End Date: 08/21/2012 Date of First Production this formation: 10/12/2012  
Perforations Top: 7874 Bottom: 8046 No. Holes: 40 Hole size: 0.42

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

Set CFP @ 8120'. 08-05-12  
Frac'd the Niobrara 7,874-7878'; 8,040-8,046'. (40 holes), w/ 99,479 gals 18 # pHaser  
Hybrid cross linked gel containing 254,939 # 30/50 sand. 08-05-12

This formation is commingled with another formation:  Yes  No  
Total fluid used in treatment (bbl): 3291 Max pressure during treatment (psi): 4317  
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): 0.43  
Total acid used in treatment (bbl): Number of staged intervals: 1  
Recycled water used in treatment (bbl): 3291 Flowback volume recovered (bbl):  
Fresh water used in treatment (bbl): Disposition method for flowback: DISPOSAL  
Total proppant used (lbs): 250520 Rule 805 green completion techniques were utilized:   
Reason why green completion not utilized:

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**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: Sheilla D. Reed-High  
Title: Drilling and Compl. Tech. Date: Email sheilla.reedhigh@Encana.com

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