



### Completed Interval

FORMATION: NIOBRARA Status: PRODUCING Treatment Type: FRACTURE STIMULATION

Treatment Date: 02/20/2012 End Date: \_\_\_\_\_ Date of First Production this formation: 03/22/2012

Perforations Top: 2402 Bottom: 2424 No. Holes: 132 Hole size: 42/100

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

"Safety meeting.  
Break down @ 1,236 psi.  
Total 49,980# 16/30 Daniels sand.  
Total 50,120# 12/20 Texas Gold sand.  
60.11 Tons CO<sub>2</sub>.  
ISIP 994 psi, 5 min 725 psi, 10 min 649 psi, 15 min 607 psi.  
Max Rate 14.5 bpm, Avg Rate 9.1 bpm.  
Max Pressure 1,238 psi, Avg Pressure 802 psi.  
541 bbl of water to recover."

This formation is commingled with another formation:  Yes  No

Total fluid used in treatment (bbl): 541 Max pressure during treatment (psi): 1238

Total gas used in treatment (mcf): 1033 Fluid density at initial fracture (lbs/gal): \_\_\_\_\_

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

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): \_\_\_\_\_ Disposition method for flowback: \_\_\_\_\_

Total proppant used (lbs): 100100 Rule 805 green completion techniques were utilized:

Reason why green completion not utilized: PIPELINE

**Fracture stimulations must be reported on FracFocus.org**

#### Test Information:

Date: 04/08/2012 Hours: 24 Bbl oil: 0 Mcf Gas: 24 Bbl H<sub>2</sub>O: 0

Calculated 24 hour rate: Bbl oil: 0 Mcf Gas: 24 Bbl H<sub>2</sub>O: 0 GOR: \_\_\_\_\_

Test Method: FLOW Casing PSI: 80 Tubing PSI: \_\_\_\_\_ Choke Size: 48/64

Gas Disposition: SOLD Gas Type: DRY Btu Gas: 966 API Gravity Oil: 0

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: WILLIAM F HAYWORTH  
Title: PRESIDENT Date: 7/2/2012 Email: BHAYWORTH@BLACKRAVENENERGY.COM

## Attachment Check List

<u>Att Doc Num</u>	<u>Name</u>
2233802	FORM 5A SUBMITTED
2233803	OTHER

Total Attach: 2 Files

## General Comments

<u>User Group</u>	<u>Comment</u>	<u>Comment Date</u>

Total: 0 comment(s)