



### Completed Interval

FORMATION: NIOBRARA Status: PRODUCING Treatment Type: FRACTURE STIMULATION  
Treatment Date: 03/29/2012 End Date: 03/29/2012 Date of First Production this formation: 09/06/2012  
Perforations Top: 2406 Bottom: 2422 No. Holes: 96 Hole size: 6 + 1/4

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

Safety meeting.  
Break down @ 1,106 psi.  
Total 50,040# 16/30 Daniels sand.  
Total 50,000# 12/20 Texas Gold sand.  
Frac Total 100,020# sand, 60.10 Tons CO<sub>2</sub>.  
ST ISIP 690 psi, 5 min 625 psi, 10 min 615 psi, 15 min 605 psi.  
Max Rate 13.9 bpm, Avg Rate 10.9 bpm.  
Max Pressure 1,080 psi, Avg Pressure 683 psi.  
553 bbl of water to recover.

This formation is commingled with another formation:  Yes  No

Total fluid used in treatment (bbl): 553 Max pressure during treatment (psi): 1106

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): 100040 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: 09/23/2012 Hours: 24 Bbl oil: 0 Mcf Gas: 117 Bbl H<sub>2</sub>O: 0

Calculated 24 hour rate: Bbl oil: 0 Mcf Gas: 117 Bbl H<sub>2</sub>O: 0 GOR: 0

Test Method: Flow Test Casing PSI: 70 Tubing PSI: 0 Choke Size: 0

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: Billy Hataway

Title: Dir Field Oper. Date: 8/27/2013 Email: bhataway@blackravenenergy.com

### Attachment Check List

Att Doc Num	Name
400472924	FORM 5A SUBMITTED

Total Attach: 1 Files

## General Comments

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

Total: 0 comment(s)