

# KANSAS CORPORATION COMMISSION

## ONE POINT STABILIZED OPEN FLOW OR DELIVERABILITY TEST

(See Instructions on Reverse Side)

Type Test:

Open Flow **AST**  
 Deliverability

Test Date:  
9/28/2011

API No. 15  
15- 023-21074-00

Company Rosewood Resources, Inc.		Lease Zwegardt		Well Number 44-10	
County Cheyenne	Location SESE	Section 10	TWP 3S	RNG (E/W) 41W	Acres Attributed 80
Field Cherry Creek		Reservoir Niobrara		Gas Gathering Connection Branch Systems Inc.	
Completion Date 10/19/2008		Plug Back Total Depth 1618'		Packer Set at	
Casing Size 4 1/2"	Weight 10.5#	Internal Diameter 6.366	Set at 1618'	Perforations 1386'	To 1416'
Tubing Size NONE	Weight	Internal Diameter	Set at	Perforations	To
Type Completion (Describe) Single (Conventional)		Type Fluid Production Dry Gas		Pump Unit or Traveling Plunger? Yes <input checked="" type="radio"/> No <input type="radio"/>	
Producing Thru (Annulus / Tubing) Annulus		% Carbon Dioxide		% Nitrogen	
Vertical Depth(H) 5360'		Pressure Taps Flange		Gas Gravity - G <sub>g</sub> .6 (Meter Run) (Prover) Size 2"	
Pressure Buildup: Shut in 9-27		20 11 at 4:15		(AM) <input checked="" type="radio"/> (PM) Taken 9-28	
Well on Line: Started 9-28		20 11 at 4:30		(AM) <input checked="" type="radio"/> (PM) Taken 9-29	

### OBSERVED SURFACE DATA

Duration of Shut-in 24 Hours

Static / Dynamic Property	Orifice Size (Inches)	Circle one: Meter or Prover Pressure psig (Pm)	Pressure Differential In Inches H <sub>2</sub> O	Flowing Temperature t	Well Head Temperature t	Casing Wellhead Pressure (P <sub>w</sub> ) or (P <sub>i</sub> ) or (P <sub>c</sub> )		Tubing Wellhead Pressure (P <sub>w</sub> ) or (P <sub>i</sub> ) or (P <sub>c</sub> )		Duration (Hours)	Liquid Produced (Barrels)
						psig	psia	psig	psia		
Shut-in						162	176.4				
Flow						88	102.4			24	

### FLOW STREAM ATTRIBUTES

Plate Coefficient (F <sub>p</sub> ) (F <sub>p</sub> ) Mcfd	Circle one: Meter or Prover Pressure psia	Press Extension $\sqrt{P_m \times h}$	Gravity Factor F <sub>g</sub>	Flowing Temperature Factor F <sub>tt</sub>	Deviation Factor F <sub>pv</sub>	Metered Flow R (Mcfd)	GOR (Cubic Feet/ Barrel)	Flowing Fluid Gravity G <sub>m</sub>
						21		

### (OPEN FLOW) (DELIVERABILITY) CALCULATIONS


(P<sub>c</sub>)<sup>2</sup> = \_\_\_\_\_ : (P<sub>w</sub>)<sup>2</sup> = \_\_\_\_\_ : P<sub>0</sub> = \_\_\_\_\_ % (P<sub>0</sub> - 14.4) + 14.4 = \_\_\_\_\_ : (P<sub>a</sub>)<sup>2</sup> = 0.207  
(P<sub>d</sub>)<sup>2</sup> = \_\_\_\_\_

(P <sub>c</sub> ) <sup>2</sup> - (P <sub>a</sub> ) <sup>2</sup> or (P <sub>c</sub> ) <sup>2</sup> - (P <sub>d</sub> ) <sup>2</sup>	(P <sub>c</sub> ) <sup>2</sup> - (P <sub>w</sub> ) <sup>2</sup>	Choose formula 1 or 2: 1. P <sub>c</sub> <sup>2</sup> - P <sub>a</sub> <sup>2</sup> 2. P <sub>c</sub> <sup>2</sup> - P <sub>d</sub> <sup>2</sup> divided by: P <sub>c</sub> <sup>2</sup> - P <sub>w</sub> <sup>2</sup>	LOG of formula 1. or 2. and divide by: P <sub>c</sub> <sup>2</sup> - P <sub>w</sub> <sup>2</sup>	Backpressure Curve Slope = "n" ----- Assigned Standard Slope	n x LOG	Antilog	Open Flow Deliverability Equals R x Antilog (Mcfd)

Open Flow Mcfd @ 14.65 psia      Deliverability Mcfd @ 14.65 psia

The undersigned authority, on behalf of the Company, states that he is duly authorized to make the above report and that he has knowledge of the facts stated therein, and that said report is true and correct. Executed this the 28 day of December, 20 11

\_\_\_\_\_  
Witness (if any)  
\_\_\_\_\_  
For Commission

  
For Company  
\_\_\_\_\_  
Checked by

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APR 24 2012

KCC WICHITA

I declare under penalty of perjury under the laws of the state of Kansas that I am authorized to request exempt status under Rule K.A.R. 82-3-304 on behalf of the operator Rosewood Resources, Inc.

and that the foregoing pressure information and statements contained on this application form are true and correct to the best of my knowledge and belief based upon available production summaries and lease records of equipment installation and/or upon type of completion or upon use being made of the gas well herein named.

I hereby request a one-year exemption from open flow testing for the Zweygardt 44-10 gas well on the grounds that said well:

(Check one)

- is a coalbed methane producer
- is cycled on plunger lift due to water
- is a source of natural gas for injection into an oil reservoir undergoing ER
- is on vacuum at the present time; KCC approval Docket No. \_\_\_\_\_
- is not capable of producing at a daily rate in excess of 250 mcf/D

I further agree to supply to the best of my ability any and all supporting documents deemed by Commission staff as necessary to corroborate this claim for exemption from testing.

Date: 12/28/11

Signature:   
Title: Assistant Production Foreman

**Instructions:** If a gas well meets one of the eligibility criteria set out in KCC regulation K.A.R. 82-3-304, the operator may complete the statement provided above in order to claim exempt status for the gas well.

At some point during the current calendar year, wellhead shut-in pressure shall have been measured after a minimum of 24 hours shut-in/buildup time and shall be reported on the front side of this form under **OBSERVED SURFACE DATA**. Shut-in pressure shall thereafter be reported yearly in the same manner for so long as the gas well continues to meet the eligibility criterion or until the claim of eligibility for exemption **IS** denied.

The G-2 form conveying the newest shut-in pressure reading shall be filed with the Wichita office no later than December 31 of the year for which it's intended to acquire exempt status for the subject well. The form must be signed and dated on the front side as though it was a verified report of annual test results.

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W2602  
 Zwegardt 44-10  
 St. Francis  
 St. Francis  
 None  
 September-11  
 FloBoss

DATE	Casing PSI	STATIC MCF	SPM CYCLIDOWN	HRS Water BLS	REMARKS (Maximum length 110 characters)
9/1/2011	86	99	22		
9/2/2011	85	98	22		
9/3/2011	85	98	22		
9/4/2011	85	98	22		
9/5/2011	85	98	22		
9/6/2011	85	98	22		
9/7/2011	86	99	22		
9/8/2011	86	99	22		
9/9/2011	86	99	22		
9/10/2011	85	99	22		
9/11/2011	86	99	22		
9/12/2011	86	99	22		
9/13/2011	86	99	22		
9/14/2011	85	98	22		
9/15/2011	85	98	22		
9/16/2011	86	99	22		
9/17/2011	87	100	22		
9/18/2011	88	101	22		
9/19/2011	88	101	22		
9/20/2011	88	101	22		
9/21/2011	88	101	22		
9/22/2011	88	101	22		
9/23/2011	88	101	22		
9/24/2011	88	101	23		
9/25/2011	88	101	22		
9/26/2011	88	101	22		
9/27/2011	88	101	22		
9/28/2011	162	175	0	24	si for state test
9/29/2011	114	127	31		
9/30/2011	91	104	25		
10/1/2011					

Total 651 0

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W2602  
 Zwegardt 44-10  
 St. Francis  
 St. Francis  
 None  
 October-11  
 FloBoss

DATE	Casing			HRS CYCLDOWN	Water BBLs	REMARKS (Maximum length 110 characters)
	PSI	STATIC MCF	SPM			
10/1/2011	89	102	23			
10/2/2011	89	102	23			
10/3/2011	88	101	23			
10/4/2011	88	101	23			
10/5/2011	87	100	23			
10/6/2011	87	100	23			
10/7/2011	88	101	21			
10/8/2011	87	100	22			
10/9/2011	87	100	21			
10/10/2011	88	101	21			
10/11/2011	89	102	21			
10/12/2011	87	100	21			
10/13/2011	87	100	21			
10/14/2011	87	100	21			
10/15/2011	87	100	21			
10/16/2011	87	100	21			
10/17/2011	88	101	21			
10/18/2011	92	105	21			
10/19/2011	89	102	21			
10/20/2011	89	102	21			
10/21/2011	88	101	21			
10/22/2011	88	101	21			
10/23/2011	88	101	21			
10/24/2011	89	102	21			
10/25/2011	88	101	21			
10/26/2011	88	101	21			
10/27/2011	89	102	21			
10/28/2011	81	94	21			
10/29/2011	81	94	21			
10/30/2011	81	94	21			
10/31/2011	80	93	21			

Total

664

0

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W2602  
 Zwegardt 44-10  
 St. Francis  
 St. Francis  
 None  
 November-11  
 FloBoss

DATE	Casing		SPM	HRS CYCLE DOWN	Water BBLs	REMARKS (Maximum length 110 characters)
	PSI	STATIC MCF				
11/1/2011	81	94	21			
11/2/2011	80	93	21			
11/3/2011	83	96	21			
11/4/2011	80	93	21			
11/5/2011	80	93	21			
11/6/2011	80	93	21			
11/7/2011	91	104	21			
11/8/2011	80	93	21			
11/9/2011	80	93	21			
11/10/2011	82	95	21			
11/11/2011	80	93	21			
11/12/2011	80	93	21			
11/13/2011	80	93	21			
11/14/2011	80	93	21			
11/15/2011	79	92	21			
11/16/2011	81	94	21			
11/17/2011	81	94	21			
11/18/2011	80	93	21			
11/19/2011	84	97	21			
11/20/2011	84	97	21			
11/21/2011	92	105	21			
11/22/2011	86	99	21			
11/23/2011	80	93	21			
11/24/2011	79	92	21			
11/25/2011	78	81	21			
11/26/2011	78	91	21			
11/27/2011	80	93	20			
11/28/2011	79	92	20			
11/29/2011	77	90	21			
11/30/2011	78	91	21			
12/1/2011	0	0	0			

Total 628 0

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