

# KANSAS CORPORATION COMMISSION ONE POINT STABILIZED OPEN FLOW OR DELIVERABILITY TEST

Type Test:

(See Instructions on Reverse Side)

Open Flow **AST**  
 Deliverability

Test Date:  
5/9/2011

API No. 15  
023-21263-00-00

Company Rosewood Resources, Inc.		Lease Zimbelman		Well Number 21-24	
County Cheyenne	Location NENW	Section 24	TWP 3S	RNG (E/W) 41W	Acres Attributed 80
Field Cherry Creek		Reservoir Niobrara	Gas Gathering Connection Branch Systems Inc.		
Completion Date 10/13/2010		Plug Back Total Depth 1391'	Packer Set at		
Casing Size 4 1/2"	Weight 10.5#	Internal Diameter 6.366	Set at 1431'	Perforations 1194'	To 1224'
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 type="checkbox"/> No <input checked="" type="checkbox"/>		
Producing Thru (Annulus / Tubing) Annulus		% Carbon Dioxide	% Nitrogen	Gas Gravity - G <sub>g</sub> .6	
Vertical Depth(H) 1450'	Pressure Taps Flange		(Meter Run) (Prover) Size 2"		
Pressure Buildup:	Shut in 5-8	20 11 at 6:05	(AM) (PM)	Taken 5-9	20 11 at 6:15 (AM) (PM)
Well on Line:	Started 5-9	20 11 at 6:15	(AM) (PM)	Taken 5-10	20 11 at 6:40 (AM) (PM)

### 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>e</sub> )		Tubing Wellhead Pressure (P <sub>w</sub> ) or (P <sub>i</sub> ) or (P <sub>e</sub> )		Duration (Hours)	Liquid Produced (Barrels)
						psig	psia	psig	psia		
Shut-In						131	145.4				
Flow						68	82.4			24	

### FLOW STREAM ATTRIBUTES

Plate Coefficient (F <sub>s</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>t</sub>	Deviation Factor F <sub>pv</sub>	Metered Flow R (Mcfd)	GOR (Cubic Feet/ Barrel)	Flowing Fluid Gravity G <sub>m</sub>
						24		

### (OPEN FLOW) (DELIVERABILITY) CALCULATIONS

(P<sub>e</sub>)<sup>2</sup> = \_\_\_\_\_ ; (P<sub>w</sub>)<sup>2</sup> = \_\_\_\_\_ ; P<sub>d</sub> = \_\_\_\_\_ % (P<sub>e</sub> - 14.4) + 14.4 = \_\_\_\_\_ ; (P<sub>e</sub>)<sup>2</sup> = 0.207 ; (P<sub>d</sub>)<sup>2</sup> = \_\_\_\_\_

(P <sub>e</sub> ) <sup>2</sup> - (P <sub>w</sub> ) <sup>2</sup> or (P <sub>e</sub> ) <sup>2</sup> - (P <sub>d</sub> ) <sup>2</sup>	(P <sub>w</sub> ) <sup>2</sup> - (P <sub>w</sub> ) <sup>2</sup>	Choose formula 1 or 2: 1. P <sub>e</sub> <sup>2</sup> - P <sub>w</sub> <sup>2</sup> 2. P <sub>e</sub> <sup>2</sup> - P <sub>d</sub> <sup>2</sup> divided by: P <sub>e</sub> <sup>2</sup> - P <sub>w</sub> <sup>2</sup>	LOG of formula 1. or 2. and divide by: $\frac{P_e^2 - P_w^2}{P_e^2 - P_d^2}$	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

*Jeanell Gevers*  
\_\_\_\_\_  
For Company

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Checked by

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 Zimbelman 21-24 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: Production Assistant

**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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Zimbelman 21-24

St. Francis

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Flow

May-11

FloBoss

DATE	Tubing PSI	Casing PSI	STATIC MCF	SPM	HRS CYCLE DOWN	Water BBLs	REMARKS (Maximum length 110 characters)
5/1/2011		76	89	25			
5/2/2011		76	89	25			
5/3/2011		75	88	25			
5/4/2011		74	87	25			
5/5/2011		74	87	25			
5/6/2011		73	86	25			
5/7/2011		73	86	25			
5/8/2011		139	152	25			
5/9/2011		131	144	0	24		Compressor Down
5/10/2011		101	114	25			
5/11/2011		77	90	27			
5/12/2011		72	85	25			
5/13/2011		70	83	25			
5/14/2011		69	82	25			
5/15/2011		68	81	24			
5/16/2011		68	81	24			
5/17/2011		68	81	24			
5/18/2011		68	81	24			drip pot installed
5/19/2011		67	80	24			
5/20/2011		68	81	24			
5/21/2011		67	80	24			
5/22/2011		80	93	23			
5/23/2011		68	81	24			
5/24/2011		67	80	24			
5/25/2011		54	67	24			
5/26/2011		67	80	24			
5/27/2011		68	81	24			
5/28/2011		69	82	24			
5/29/2011		69	82	24			
5/30/2011		69	82	24			
5/31/2011		68	81	24			

Total

734

0

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Zimbelman 21-24

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Flow

June-11

FloBoss

DATE	Tubing Casing		STATIC MCF	SPM	HRS CYCLE DOWN	Water BBL	REMARKS (Maximum length 110 characters)
	PSI	PSI					
6/1/2011		77	90	23			
6/2/2011		71	84	23			
6/3/2011		70	83	23			
6/4/2011		70	83	23			
6/5/2011		70	83	23			
6/6/2011		70	83	23			
6/7/2011		69	82	23			
6/8/2011		69	82	23			
6/9/2011		70	83	23			
6/10/2011		70	83	23			
6/11/2011		70	83	23			
6/12/2011		70	83	23			
6/13/2011		70	83	23			
6/14/2011		71	84	23			
6/15/2011		69	82	23			
6/16/2011		74	87	22			
6/17/2011		72	85	23			
6/18/2011		72	85	22			
6/19/2011		72	85	22			
6/20/2011		72	85	22			
6/21/2011		72	85	22			
6/22/2011		72	85	22			
6/23/2011		72	85	22			
6/24/2011		82	95	22	1		
6/25/2011		70	83	22			
6/26/2011		69	82	22			
6/27/2011		68	81	22			
6/28/2011		69	82	22			
6/29/2011		69	82	22			
6/30/2011		70	83	22			
7/1/2011							

Total

676

0

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Zimbelman, 21-24

St. Francis

St. Francis

Flow

July-11

FloBoss

DATE	Tubing Casing		STATIC MCF	SPM	HRS CYCLE DOWN	Water BBLs	REMARKS (Maximum length 110 characters)
	PSI	PSI					
7/1/2011		70	83	22			
7/2/2011		59	72	22			
7/3/2011		60	73	22			
7/4/2011		60	73	22			
7/5/2011		69	82	22			
7/6/2011		69	82	22			
7/7/2011		69	82	22			
7/8/2011		69	82	22			
7/9/2011		68	81	22			
7/10/2011		69	82	22			
7/11/2011		68	81	22			
7/12/2011		68	81	22			
7/13/2011		64	77	22		1	
7/14/2011		68	81	21			
7/15/2011		60	73	22			
7/16/2011		65	78	21			
7/17/2011		65	78	21			
7/18/2011		80	93	21			
7/19/2011		70	83	21		2	
7/20/2011		69	82	21			
7/21/2011		76	89	21			
7/22/2011		65	78	21			
7/23/2011		66	79	21			
7/24/2011		66	79	21			
7/25/2011		66	79	21			
7/26/2011		66	79	21			
7/27/2011		66	79	21			
7/28/2011		67	80	21			
7/29/2011		63	76	20			
7/30/2011		68	67	21			
7/31/2011		54	67	21			

Total

664

0

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