

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

Type Test:

- Open Flow  Deliverability

(See Instructions on Reverse Side)

Test Date:  
7/9/20015

API No. 15  
023-20609-0000

Company Rosewood Resources		Lease Zimbelman			Well Number 4-24
County Cheyenne	Location NW NW	Section 24	TWP 3S	RNG (E/W) 41W	Acres Attributed 80
Field Cherry Creek		Reservoir Niobrara		Gas Gathering Connection Branch Systems Inc.	
Completion Date 5/18/2005		Plug Back Total Depth 1403'		Packer Set at	
Casing Size 4 1/2"	Weight 10.5#	Internal Diameter 4.052	Set at 1403'	Perforations 1202'	To to 1234'
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? <input checked="" type="radio"/> Yes / No Pumping Unit	
Producing Thru (Annulus / Tubing) Annulus		% Carbon Dioxide		% Nitrogen	Gas Gravity - G <sub>g</sub> .6
Vertical Depth(H) 1234'		Pressure Taps Flange			(Meter Run) (Prover) Size 2"
Pressure Buildup: Shut in 7-9		20 15 at 8:30	<input checked="" type="radio"/> (AM) (PM)	Taken 7-10	20 15 at 8:45 <input checked="" type="radio"/> (AM) (PM)
Well on Line: Started 7-10		20 15 at 8:45	<input checked="" type="radio"/> (AM) (PM)	Taken 7-11	20 15 at 9:30 <input checked="" type="radio"/> (AM) (PM)

### OBSERVED SURFACE DATA

Duration of Shut-in 24 Hours

Static / Dynamic Property	Orifice Size (Inches)	Circle one: Meter 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>1</sub> ) or (P <sub>c</sub> )		Tubing Wellhead Pressure (P <sub>w</sub> ) or (P <sub>1</sub> ) or (P <sub>c</sub> )		Duration (Hours)	Liquid Produced (Barrels)
						psig	psia	psig	psia		
Shut-In						173	187.4				
Flow						43	57.4			24	0

### FLOW STREAM ATTRIBUTES

Plate Coefficient (F <sub>b</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 (Mcf/d)	GOR (Cubic Feet/ Barrel)	Flowing Fluid Gravity G <sub>m</sub>
						15		

### (OPEN FLOW) (DELIVERABILITY) CALCULATIONS

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

(P <sub>c</sub> ) <sup>2</sup> - (P <sub>w</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>w</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: $\frac{P_c^2 - P_w^2}{P_c^2 - P_w^2}$	Backpressure Curve Slope = "n" ----- Assigned Standard Slope	n x LOG [ ]	Antilog	Open Flow Deliverability Equals R x Antilog (Mcf/d)

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 18 day of December, 20 15.

\_\_\_\_\_  
Witness (if any)

Samuel Martiny  
For Company

\_\_\_\_\_  
For Commission

\_\_\_\_\_  
Checked by

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 4-24 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: 12/18/15

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Signature: *Denard Matney*  
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.

W383

Zimelman, 04-24

St. Francis

St. Francis

None

July-15

FloBoss

DATE	Tubing PSI	Casing PSI	STATIC	MCF	SPM	CYCLE	HRS DOWN	Water BBLs	REMARKS (Maximum length 110 characters)
7/1/2015		44	57		15			0	p u off
7/2/2015		44	57		15			0	
7/3/2015		44	57		15			0	
7/4/2015		44	57		15			0	
7/5/2015		44	57		15			0	
7/6/2015		43	56		15			2	
7/7/2015		43	56		14			0	
7/8/2015		43	56		14			16	
7/9/2015		90	103		1			24	
7/10/2015		173	186		0			14	
7/11/2015		98	111		15			0	
7/12/2015		70	83		22			0	
7/13/2015		54	67		14			0	
7/14/2015		44	57		17			0	
7/15/2015		45	58		16			0	
7/16/2015		44	57		16			0	
7/17/2015		44	57		16			0	
7/18/2015		43	56		16			0	
7/19/2015		43	56		15			0	
7/20/2015		42	55		15			0	
7/21/2015		47	60		15			2	
7/22/2015		43	56		15			0	
7/23/2015		43	56		15			0	
7/24/2015		43	56		15			0	
7/25/2015		43	56		15			0	
7/26/2015		43	56		15			0	
7/27/2015		42	55		15			0	
7/28/2015		42	55		14			0	
7/29/2015		42	55		14			0	
7/30/2015		42	55		14			0	
7/31/2015		42	55		14			0	
Total					442			0	

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Zimbelman(04-24)

St. Francis

St. Francis

None

August-15

FloBoss

DATE	Tubing PSI	Casing PSI	STATIC	MCF	SPM	CYCLE	HRS DOWN	Water BBLs	REMARKS (Maximum length 110 characters)
8/1/2015		43	56	14				2	
8/2/2015		44	57	14				0	
8/3/2015		43	56	14				0	
8/4/2015		43	56	14				0	
8/5/2015		42	55	14				0	
8/6/2015		42	55	14				0	
8/7/2015		43	56	14				0	
8/8/2015		43	56	14				0	
8/9/2015		43	56	14				0	
8/10/2015		46	59	14				0	
8/11/2015		46	59	14				0	
8/12/2015		46	59	14				0	
8/13/2015		47	60	15				0	
8/14/2015		47	60	15				0	
8/15/2015		48	61	15				0	
8/16/2015		49	62	15				0	
8/17/2015		49	62	15				0	
8/18/2015		48	61	15				0	
8/19/2015		47	60	15				0	
8/20/2015		47	60	15				0	
8/21/2015		47	60	15				0	
8/22/2015		47	60	15				0	
8/23/2015		47	60	15				0	
8/24/2015		47	60	15				0	
8/25/2015		47	60	15				0	
8/26/2015		47	60	15				0	
8/27/2015		47	60	15				0	
8/28/2015		47	60	15				0	
8/29/2015		47	60	15				0	
8/30/2015		47	60	15				4	
8/31/2015		47	60	15				0	

Total

453

0

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Zimbelman, 04-24

St. Francis

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None

September-15

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DATE	Tubing PSI	Casing PSI	STATIC	MCF	SPM	CYCLE	HRS DOWN	Water BBLs	REMARKS (Maximum length 110 characters)
9/1/2015		13	26		2			2	being worked over
9/2/2015		43	56		10	6	24	0	10 need felt in oiler box
9/3/2015		43	56		10	6	24	0	20
9/4/2015		47	60		20	6	24	0	20
9/5/2015		55	68		22	6	24	0	20
9/6/2015		55	68		25	6	24	0	20
9/7/2015		53	66		27	6	24	0	20
9/8/2015		53	66		29	6	24	0	20
9/9/2015		46	59		32	6	24	0	20
9/10/2015		46	59		34	6	24	0	20
9/11/2015		46	59		36	6	24	0	20
9/12/2015		46	59		38	6	24	0	20
9/13/2015		46	59		40	6	24	0	20
9/14/2015		46	59		42	6	24	0	20
9/15/2015		46	59		43	6	24	0	20
9/16/2015		46	59		43	6	24	0	20
9/17/2015		46	59		43	6	24	0	20
9/18/2015		46	59		43	6	24	0	20
9/19/2015		46	59		43	6	24	0	20
9/20/2015		46	59		43	6	24	0	20
9/21/2015		46	59		43	6	24	0	20
9/22/2015		46	59		43	6	24	0	20
9/23/2015		46	59		43	6	24	0	20
9/24/2015		46	59		43	6	24	0	20
9/25/2015		46	59		43	6	24	0	20
9/26/2015		46	59		43	6	24	0	20
9/27/2015		46	59		43	6	24	0	20
9/28/2015		46	59		43	6	24	0	20
9/29/2015		46	59		43	6	24	0	20
9/30/2015		46	59		43	6	24	0	20
10/1/2015			13					0	

Total

1055

570

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