

# KANSAS CORPORATION COMMISSION

## ONE POINT STABILIZED OPEN FLOW OR DELIVERABILITY TEST

Type Test:

- Open Flow **ESI**  
 Deliverability

(See Instructions on Reverse Side)

Test Date:  
6/22/14

API No. 15  
023-21268-0000

Company Rosewood Resources, Inc.		Lease Zimbelman		Well Number 23-24	
County Cheyenne	Location NESW	Section 24	TWP 3S	RNG (E/W) 41W	Acres Attributed 80
Field Cherry Creek		Reservoir Niobrara	Gas Gathering Connection Branch Systems Inc.		
Completion Date 10/1/2010		Plug Back Total Depth 1461'	Packer Set at		
Casing Size 4 1/2"	Weight 10.5#	Internal Diameter 6.366	Set at 1499'	Perforations 1304'	To 1334'
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="checkbox"/> No <input type="checkbox"/>		
Producing Thru (Annulus / Tubing) Annulus		% Carbon Dioxide	% Nitrogen	Gas Gravity - G <sub>g</sub> .6	
Vertical Depth (H) 1510'		Pressure Taps Flange		(Meter Run) (Prover) Size 2"	
Pressure Buildup: Shut in 6-7		20 14 at 6:25	(AM) (PM) Taken 6-11	20 14 at 6:35	(AM) (PM)
Well on Line: Started 6-22		20 14 at 6:35	(AM) (PM) Taken 6-23	20 14 at 6:50	(AM) (PM)

### OBSERVED SURFACE DATA

Duration of Shut-in 360 Hours

Static / Dynamic Property	Orifice Size (Inches)	Circle one: Meter Prover Pressure psig (P <sub>m</sub> )	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						221	235.4				
Flow						54	68.4			360	

### FLOW STREAM ATTRIBUTES

Plate Coefficient (F <sub>b</sub> ) (F <sub>a</sub> ) Mcfd	Circle one: Meter or Prover Pressure psia	Press Extension $\sqrt{P_m \times h}$	Gravity Factor F <sub>c</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>
						3		

### (OPEN FLOW) (DELIVERABILITY) CALCULATIONS

(P<sub>a</sub>)<sup>2</sup> = 0.207

(P<sub>g</sub>)<sup>2</sup> = \_\_\_\_\_

(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>c</sub> ) <sup>2</sup> - (P <sub>a</sub> ) <sup>2</sup> or (P <sub>c</sub> ) <sup>2</sup> - (P <sub>g</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>g</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: $P_c^2 - P_w^2$	Backpressure Curve Slope = "n" ----- Assigned Standard Slope	n x LOG [ ]	Antilog	Open Flow Deliverability Equals R x Antilog (Mcfd)

Open Flow Mcf @ 14.65 psia Deliverability Mcf @ 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 12 day of December, 20 14.

Received  
KANSAS CORPORATION COMMISSION

*Arnold Martus*  
For Company

Witness (if any)

FEB 25 2015

For Commission

Checked by

CONSERVATION DIVISION  
WICHITA, KS

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 23-24 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: 12/12/14

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KANSAS CORPORATION COMMISSION

Signature: \_\_\_\_\_

*Samuel Mathney*

FEB 25 2015

Title: Production Assistant

CONSERVATION DIVISION  
WICHITA, KS

**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.

W2747

Zimbelman 23-24

St. Francis

St. Francis

Flow

June-174

FloBoss

DATE	Casing PSI	STATIC	MCF	HRS DOWN	REMARKS (Maximum length 110 characters)
6/1/2013	56	69		3	0
6/2/2013	60	73		2	0
6/3/2013	76	89		2	0
6/4/2013	67	80		2	0
6/5/2013	51	64		2	0
6/6/2013	52	65		2	0
6/7/2013	176	189		2	9
6/8/2013	188	201		0	24
6/9/2013	201	214		0	24
6/10/2013	213	226		0	24
6/11/2013	222	235		0	24
6/12/2013	227	240		0	24
6/13/2013	229	242		0	24
6/14/2013	229	242		0	24
6/15/2013	230	243		0	24
6/16/2013	230	243		0	24
6/17/2013	231	244		0	24
6/18/2013	230	243		0	24
6/19/2013	217	240		0	24
6/20/2013	223	236		0	24
6/21/2013	221	234		0	24
6/22/2013	221	234		0	24
6/23/2013	118	131		1	5
6/24/2013	109	122		3	0
6/25/2013	104	117		4	0
6/26/2013	92	105		4	0
6/27/2013	87	100		4	0
6/28/2013	66	79		6	0
6/29/2013	55	68		5	0
6/30/2013	56	69		5	0
7/1/2013					0

Total

47

Received  
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CONSERVATION DIVISION  
WICHITA, KS

W2747

Zimbelman 23-24

St. Francis

St. Francis

Flow

July-14

FloBoss

DATE	Casing PSI	STATIC	MCF	HRS DOWN	REMARKS (Maximum length 110 characters)
7/1/2014	56	69		4	0
7/2/2014	56	69		4	0
7/3/2014	56	69		3	0
7/4/2014	56	69		3	0
7/5/2014	57	70		3	0
7/6/2014	57	70		3	0
7/7/2014	67	80		3	0
7/8/2014	58	71		3	0
7/9/2014	59	72		3	0
7/10/2014	59	72		3	0
7/11/2014	63	76		3	0
7/12/2014	62	75		3	0
7/13/2014	62	75		3	0
7/14/2014	87	100		3	0
7/15/2014	53	66		3	0
7/16/2014	56	69		3	0
7/17/2014	56	69		3	0
7/18/2014	57	70		3	0
7/19/2014	54	66		3	0
7/20/2014	55	68		3	0
7/21/2014	133	146		3	0
7/22/2014	132	145		0	22
7/23/2014	80	93		4	7
7/24/2014	50	63		4	3
7/25/2014	54	67		4	4
7/26/2014	53	66		3	0
7/27/2014	54	67		3	0
7/28/2014	54	67		3	0
7/29/2014	54	67		3	0
7/30/2014	55	68		3	0
7/31/2014	55	68		3	0

Total

95

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KANSAS CORPORATION COMMISSION

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CONSERVATION DIVISION  
WICHITA, KS

W2747

Zimbelman 23-24

St. Francis

St. Francis

Flow

August-14

FloBoss

DATE	Casing PSI	STATIC	MCF	HRS DOWN	REMARKS (Maximum length 110 characters)
8/1/2014	55	68		3	0
8/2/2014	54	67		3	0
8/3/2014	54	67		3	0
8/4/2014	54	67		3	0
8/5/2014	55	68		3	0
8/6/2014	56	69		3	0
8/7/2014	58	71		2	0
8/8/2014	57	70		2	0
8/9/2014	58	71		2	0
8/10/2014	59	72		2	0
8/11/2014	66	79		2	0
8/12/2014	54	67		2	0
8/13/2014	55	68		2	0
8/14/2014	54	67		2	0
8/15/2014	60	73		2	3
8/16/2014	58	71		2	0
8/17/2014	59	72		2	0
8/18/2014	59	72		2	0
8/19/2014	67	80		2	2
8/20/2014	57	70		2	0
8/21/2014	56	69		2	0
8/22/2014	59	72		2	0
8/23/2014	53	66		2	0
8/24/2014	54	67		2	0
8/25/2014	79	92		2	0
8/26/2014	56	69		2	0
8/27/2014	67	60		2	0
8/28/2014	96	109		2	0
8/29/2014	53	66		2	5
8/30/2014	52	65		2	0
8/31/2014	67	80		2	0

Total

68

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