

# KANSAS CORPORATION COMMISSION

## ONE POINT STABILIZED OPEN FLOW OR DELIVERABILITY TEST

Type Test:

- Open Flow  Deliverability

(See Instructions on Reverse Side)

Test Date:  
7/9/2015

API No. 15  
023-20607-0000

Company Rosewood Resources, Inc.		Lease Zweygardt		Well Number 2-24	
County Cheyenne	Location NE NE/4	Section 24	TWP 3S	RNG (E/W) 41W	Acres Attributed 80
Field Cherry Creek		Reservoir Niobrara		Gas Gathering Connection Branch Systems Inc.	
Completion Date 5/4/2005		Plug Back Total Depth 1425'		Packer Set at	
Casing Size 4 1/2"	Weight 10.5#	Internal Diameter 4.052	Set at 1425'	Perforations 1202'	To 1236'
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="checkbox"/> Yes / No Pumping Unit	
Producing Thru (Annulus / Tubing) Annulus		% Carbon Dioxide		% Nitrogen	
Vertical Depth(H) 1236'		Pressure Taps Flange		(Meter Run) (Prover) Size 2"	
Pressure Buildup: Shut in 7-9		20 15 at 9:45		(AM) (PM) Taken 7-10	
Well on Line: Started 7-10		20 15 at 10:00		(AM) (PM) Taken 7-11	
		20 15 at 10:00		(AM) (PM)	
		20 15 at 10:45		(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>t</sub> ) or (P <sub>c</sub> )		Tubing Wellhead Pressure (P <sub>w</sub> ) or (P <sub>t</sub> ) or (P <sub>c</sub> )		Duration (Hours)	Liquid Produced (Barrels)
						psig	psia	psig	psia		
Shut-In						102	116.4				
Flow						47	61.4			24	

### 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 (Mcfd)	GOR (Cubic Feet/ Barrel)	Flowing Fluid Gravity G <sub>m</sub>
						29		

### (OPEN FLOW) (DELIVERABILITY) CALCULATIONS

(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>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>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: $P_c^2 - P_w^2$	Backpressure Curve Slope = "n" or 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 18 day of December, 20 15.

**KCC WICHITA**

*[Signature]*  
For Company

Witness (if any)

APR 07 2016

For Commission

Checked by

**RECEIVED**

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 2-24 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

KCC WICHITA  
APR 07 2016  
RECEIVED

Signature: *Dannell 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.

KCC WICHITA  
APR 07 2016  
RECEIVED

DATE	Casing PSI	STATIC MCF	SPM	CYCLE DOWN	HRS	Water BLS	REMARKS (Maximum length 110 characters)
7/1/2015	50	63	30	7.5	3	0	
7/2/2015	50	63	30	7.5	3	0	
7/3/2015	50	63	30	7.5	3	0	
7/4/2015	50	63	30	7.5	3	0	
7/5/2015	50	63	30	7.5	3	0	
7/6/2015	49	62	29	7.5	3	2	
7/7/2015	49	62	29	7.5	3	0	
7/8/2015	49	62	29	7.5	3	16	9 turn off p u
7/9/2015	50	63	0	7.5	3	24	
7/10/2015	102	115	0	7.5	3	14	
7/11/2015	95	108	9	7.5	3	0	
7/12/2015	74	87	33	7.5	3	0	
7/13/2015	60	73	38	7.5	3	0	0 restarted pu
7/14/2015	50	63	27	7.5	3	0	
7/15/2015	51	64	27	7.5	3	0	
7/16/2015	49	62	27	7.5	3	0	
7/17/2015	49	62	27	7.5	3	0	
7/18/2015	49	62	27	7.5	3	0	
7/19/2015	48	61	28	7.5	3	0	
7/20/2015	48	61	28	7.5	3	0	
7/21/2015	53	66	26	7.5	3	2	
7/22/2015	48	61	29	7.5	3	0	
7/23/2015	48	61	29	7.5	3	0	
7/24/2015	48	61	29	7.5	3	0	
7/25/2015	48	61	29	7.5	3	0	
7/26/2015	48	61	29	7.5	3	0	
7/27/2015	47	60	29	7.5	3	0	
7/28/2015	47	60	29	7.5	3	0	
7/29/2015	47	60	29	7.5	3	0	
7/30/2015	47	60	29	7.5	3	0	
7/31/2015	47	60	29	7.5	3	0	
Total		824				234	

W386



St. Francis

St. Francis

None

July-15

FloBoss

W386

Zivegard 02-24

St. Francis

St. Francis

None

August-15

FloBoss

DATE	Casing PSI	STATIC	MCF	SPM	CYCLE	HRS DOWN	Water BBLs	REMARKS (Maximum length 110 characters)
8/1/2015	47	60	29	7.5	3	0	8	
8/2/2015	47	60	29	7.5	3	0	8	
8/3/2015	48	61	29	7.5	3	0	8	
8/4/2015	47	60	29	7.5	3	0	8	
8/5/2015	47	60	29	7.5	3	0	8	
8/6/2015	47	60	29	7.5	3	0	8	
8/7/2015	47	60	29	7.5	3	0	8	
8/8/2015	48	61	29	7.5	3	0	8	
8/9/2015	49	62	29	7.5	3	0	8	
8/10/2015	51	64	29	7.5	3	0	8	
8/11/2015	52	65	29	7.5	3	0	8	
8/12/2015	52	65	29	7.5	3	0	8	
8/13/2015	53	66	28	7.5	3	0	8	
8/14/2015	53	66	28	7.5	3	0	8	
8/15/2015	53	66	28	7.5	3	0	8	
8/16/2015	54	67	28	7.5	3	0	8	
8/17/2015	54	67	28	7.5	3	0	8	
8/18/2015	53	66	28	7.5	3	0	8	
8/19/2015	53	66	28	7.5	3	0	8	
8/20/2015	53	66	28	7.5	3	0	8	
8/21/2015	53	66	28	7.5	3	0	8	
8/22/2015	53	66	28	7.5	3	0	8	
8/23/2015	53	66	28	7.5	3	0	8	
8/24/2015	53	66	28	7.5	3	0	8	
8/25/2015	56	69	27	7.5	3	0	8	
8/26/2015	56	69	27	7.5	3	0	8	
8/27/2015	56	69	27	7.5	3	0	8	
8/28/2015	56	69	27	7.5	3	0	8	
8/29/2015	56	69	27	7.5	3	0	8	
8/30/2015	56	69	27	7.5	3	4	8	
8/31/2015	56	69	27	7.5	3		8	
Total			873				248	

KCC WICHITA

APR 07 2016

RECEIVED

KCC WICHITA  
 APR 07 2016  
 RECEIVED

DATE	Casing	PSI	STATIC	MCF	SPM	CYCLE DOWN	HRS	Water	BLS	REMARKS (Maximum length 110 characters)
9/1/2015	49	62	25	7.5	3	0	8			
9/2/2015	49	62	31	7.5	3	0	8			
9/3/2015	51	64	30	7.5	3	0	8			
9/4/2015	55	68	29	7.5	3	0	8			
9/5/2015	60	73	28	7.5	3	0	8			
9/6/2015	60	73	28	7.5	3	0	8			
9/7/2015	58	71	28	7.5	3	0	8			
9/8/2015	58	71	28	7.5	3	0	8			
9/9/2015	51	64	28	7.5	3	0	8			
9/10/2015	51	64	28	7.5	3	0	8			
9/11/2015	51	64	28	7.5	3	0	8			
9/12/2015	51	64	28	7.5	3	0	8			
9/13/2015	51	64	28	7.5	3	0	8			
9/14/2015	51	64	28	7.5	3	0	8			
9/15/2015	51	64	28	7.5	3	0	8			
9/16/2015	51	64	28	7.5	3	0	8			
9/17/2015	51	64	28	7.5	3	0	8			
9/18/2015	51	64	28	7.5	3	0	8			
9/19/2015	51	64	28	7.5	3	0	8			
9/20/2015	51	64	28	7.5	3	0	8			
9/21/2015	51	64	28	7.5	3	0	8			
9/22/2015	51	64	28	7.5	3	0	8			
9/23/2015	51	64	28	7.5	3	0	8			
9/24/2015	51	64	28	7.5	3	0	8			
9/25/2015	51	64	28	7.5	3	0	8			
9/26/2015	51	64	28	7.5	3	0	8			
9/27/2015	51	64	28	7.5	3	0	8			
9/28/2015	51	64	28	7.5	3	0	8			
9/29/2015	51	64	28	7.5	3	0	8			
9/30/2015	51	64	28	7.5	3	0	8			
10/1/2015	13			7.5	3		8			
Total										843
Total										248

W386

Zweygardt 02-24

St. Francis

St. Francis

None

September-15

Floboss