

# KANSAS CORPORATION COMMISSION

## ONE POINT STABILIZED OPEN FLOW OR DELIVERABILITY TEST

Type Test:

- Open Flow **AST**  
 Deliverability

(See Instructions on Reverse Side)

Test Date:  
8/17/2012

API No. 15  
023-21262-0000

Company Rosewood Resources, Inc.		Lease Zweygartd		Well Number 31-24	
County Cheyenne	Location NWNE	Section 24	TWP 3S	Range (E/W) 41W	Acres Attributed 80
Field Cherry Creek		Reservoir Niobrara		Gas Gathering Connection Branch Systems Inc.	
Completion Date 10/12/2010		Plug Back Total Depth 1416'		Packer Set at	
Casing Size 4 1/2"	Weight 10.5#	Internal Diameter 6.366	Set at 1456'	Perforations 1192'	To 1222'
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	
Vertical Depth(H) 1470'		Pressure Taps Flange		(Meter Run) (Prover) Size 2"	
Pressure Buildup: Shut in 8-16 20 12 at 5:45 (AM) (PM) Taken 8-17 20 12 at 6:00 (AM) (PM)		Well on Line: Started 8-17 20 12 at 6:00 (AM) (PM) Taken 8-18 20 12 at 6:25 (AM) (PM)			

RECEIVED  
JAN 03 2013

KCC WICHITA

### OBSERVED SURFACE DATA

Duration of Shut-in 24 Hours

Static / Dynamic Property	Orifice Size (inches)	Circle one: Meter or 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>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						217	231.4				
Flow						73	87.4			24	

### FLOW STREAM ATTRIBUTES

Plate Coefficient (F <sub>b</sub> ) (F <sub>d</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>
						18		

### (OPEN FLOW) (DELIVERABILITY) CALCULATIONS

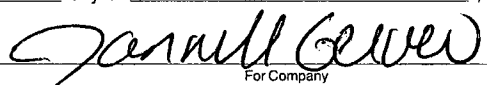
(P<sub>c</sub>)<sup>2</sup> = \_\_\_\_\_ : (P<sub>w</sub>)<sup>2</sup> = \_\_\_\_\_ : P<sub>d</sub> = \_\_\_\_\_ % (P<sub>c</sub> - 14.4) + 14.4 = \_\_\_\_\_ : (P<sub>a</sub>)<sup>2</sup> = 0.207  
(P<sub>d</sub>)<sup>2</sup> = \_\_\_\_\_

(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: $\frac{P_c^2 - P_a^2}{P_c^2 - P_w^2}$	Backpressure Curve Slope = "n" ----- Assigned Standard Slope	n x LOG [ ]	Antilog	Open Flow Deliverability Equals R x Antilog (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 19 day of December, 20 12.

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

  
For Company

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

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

RECEIVED

Form G-2  
(Rev. 7/03)

JAN 03 2013

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 31-24 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: 12/19/12

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.

W2743  
 Zwegardt 31-24  
 St. Francis  
 St. Francis  
 Flow  
 August-12  
 FloBoss

RECEIVED  
 JAN 03 2013  
 KCC WICHITA

DATE	Tubing Casing		STATIC MCF	SPM	CYCLE DOWN	HRS	Water BBLs	REMARKS (Maximum length 110 characters)
	PSI	PSI						
8/1/2012		71	84	10				
8/2/2012		64	77	19				
8/3/2012		65	78	20				
8/4/2012		62	75	19				
8/5/2012		71	84	19				
8/6/2012		66	79	19				
8/7/2012		70	83	19				
8/8/2012		67	80	19				
8/9/2012		63	76	19				
8/10/2012		80	93	19				
8/11/2012		68	81	18		1.5		
8/12/2012		65	78	18				
8/13/2012		64	77	18				
8/14/2012		66	79	18				
8/15/2012		73	86	18				
8/16/2012		64	77	18				
8/17/2012		217	65	0		24		si for state test cp-69 reopened cp-217
8/18/2012		73	86	28				
8/19/2012		69	82	21				
8/20/2012		62	75	19				
8/21/2012		66	79	19				
8/22/2012		64	77	19				
8/23/2012		68	81	19				
8/24/2012		69	82	18				
8/25/2012		69	82	18				
8/26/2012		66	79	18				
8/27/2012		65	78	18				
8/28/2012		66	79	18				
8/29/2012		67	80	18				
8/30/2012		65	78	18				
8/31/2012		65	78	18				

Total

559

0

W2743

Zweygardt 31-24

St. Francis

St. Francis

Flow

September-12

FloBoss

RECEIVED  
JAN 03 2013  
KCC WICHITA

DATE	Casing PSI	STATIC	MCF	HRS DOWN	REMARKS (Maximum length 110 characters)
9/1/2012	66	79		18	
9/2/2012	68	81		18	
9/3/2012	63	76		18	
9/4/2012	63	76		18	1
9/5/2012	80	93		18	
9/6/2012	80	93		18	
9/7/2012	150	163		6	19
9/8/2012	170	183		0	24
9/9/2012	178	191		0	24
9/10/2012	182	195		0	24
9/11/2012	183	196		0	24
9/12/2012	184	197		0	24
9/13/2012	135	148		21	10
9/14/2012	113	126		40	
9/15/2012	102	115		27	
9/16/2012	96	109		24	
9/17/2012	85	98		22	
9/18/2012	69	82		22	
9/19/2012	83	96		20	
9/20/2012	60	73		20	
9/21/2012	60	73		20	
9/22/2012	62	75		19	
9/23/2012	60	73		19	
9/24/2012	64	77		19	
9/25/2012	65	78		19	
9/26/2012	66	79		19	
9/27/2012	73	86		19	
9/28/2012	67	80		18	
9/29/2012	67	80		18	
9/30/2012	66	79		18	
10/1/2012					

Total

498

W2743  
 Zwegardt 31-24  
 St. Francis  
 St. Francis  
 Flow  
 October-12  
 FloBoss

RECEIVED  
 JAN 03 2013  
 KCC WICHITA

DATE	Casing PSI	STATIC	MCF	HRS DOWN	REMARKS (Maximum length 110 characters)
10/1/2012	65	78	18		
10/2/2012	66	79	18		
10/3/2012	66	79	18		
10/4/2012	63	76	18		
10/5/2012	64	77	18		
10/6/2012	63	76	18		
10/7/2012	64	77	17		
10/8/2012	63	76	18		
10/9/2012	65	78	18		
10/10/2012	65	78	18		
10/11/2012	66	79	18		
10/12/2012	64	77	18		
10/13/2012	66	79	18		
10/14/2012	67	80	17		
10/15/2012	66	79	17		
10/16/2012	85	98	17	1	
10/17/2012	66	79	17		
10/18/2012	63	76	17		
10/19/2012	64	77	17		
10/20/2012	66	79	17		
10/21/2012	63	76	17		
10/22/2012	64	77	17		
10/23/2012	65	78	17		
10/24/2012	64	77	17		
10/25/2012	59	72	17		
10/26/2012	62	75	17		
10/27/2012	62	75	17		
10/28/2012	61	74	17		
10/29/2012	86	99	17	2	
10/30/2012	76	89	17		
10/31/2012	59	72	17		

Total

539