

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

Type Test:

(See Instructions on Reverse Side)

- Open Flow **ASI**  
 Deliverability

Test Date:  
8/22/2012

API No. 15  
023-21255-0000

Company Rosewood Resources, Inc.		Lease Zweygardt		Well Number 13-19	
County Cheyenne	Location NWSW	Section 19	TWP 3S	RNG (E/W) 40W	Acres Attributed 80
Field Cherry Creek		Reservoir Niobrara	Gas Gathering Connection Branch Systems Inc.		
Completion Date 11/12/10		Plug Back Total Depth 1500'	Packer Set at		
Casing Size 4 1/2"	Weight 10.5#	Internal Diameter 6.366	Set at 1500'	Perforations 1334'	To 1364'
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) 1515'		Pressure Taps Flange		Gas Gravity - G <sub>g</sub> .6	
				(Meter Run) (Prover) Size 2"	
Pressure Buildup: Shut in 8-21		20 12 at 5:10		(AM) (PM) Taken 8-22	
				20 12 at 5:25 (AM) (PM)	
Well on Line: Started 8-22		20 12 at 5:25		(AM) (PM) Taken 8-23	
				20 12 at 5:40 (AM) (PM)	

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### 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						223	237.4				
Flow						82	96.4			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>
						14		

### (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" ----- 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 19 day of December, 20 12.

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

*Jannell Grew*  
\_\_\_\_\_  
For Company

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

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

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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 13-19 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.

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W2731

Zweygardt 13-19

St. Francis

St. Francis

Flow

August-12

FloBoss

DATE	Tubing Casing		STATIC MCF	SPM	HRS CYCLEDOWN	Water BBLs	REMARKS (Maximum length 110 characters)
	PSI	PSI					
8/1/2012		83	96	14			
8/2/2012		77	90	14			
8/3/2012		78	91	14			
8/4/2012		75	88	14			
8/5/2012		85	98	14			
8/6/2012		76	89	14			
8/7/2012		82	95	14			
8/8/2012		79	92	14			
8/9/2012		77	90	14			
8/10/2012		90	103	14			
8/11/2012		79	82	14	1.5		
8/12/2012		76	89	14			
8/13/2012		75	88	14			
8/14/2012		76	89	14			
8/15/2012		85	98	14			
8/16/2012		75	88	14			
8/17/2012		76	89	14			
8/18/2012		80	93	14			
8/19/2012		77	90	14			
8/20/2012		74	87	14			
8/21/2012		67	80	14			si for state test cp-76
8/22/2012		223	80	0	24		reopened cp-223
8/23/2012		82	95	21			
8/24/2012		84	97	15			
8/25/2012		82	95	15			
8/26/2012		78	91	14			
8/27/2012		77	90	14			
8/28/2012		76	89	14			
8/29/2012		78	91	14			
8/30/2012		77	90	14			
8/31/2012		77	90	14			

Total

429

0

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Zweygartf 13-19

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Flow

September-12

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DATE	Casing PSI	STATIC	MCF	HRS DOWN	REMARKS (Maximum length 110 characters)
9/1/2012	76	89		14	
9/2/2012	80	93		14	
9/3/2012	76	89		14	
9/4/2012	76	89		14	1
9/5/2012	89	102		14	
9/6/2012	89	102		14	
9/7/2012	151	164		4	19
9/8/2012	171	184		0	24
9/9/2012	177	190		0	24
9/10/2012	181	194		0	24
9/11/2012	183	196		0	24
9/12/2012	184	197		0	24
9/13/2012	144	157		13	10
9/14/2012	121	134		22	
9/15/2012	112	125		17	
9/16/2012	106	119		17	
9/17/2012	99	112		15	
9/18/2012	84	97		15	
9/19/2012	92	105		15	
9/20/2012	76	89		15	
9/21/2012	75	88		15	
9/22/2012	76	89		14	
9/23/2012	75	88		14	
9/24/2012	75	88		14	
9/25/2012	79	92		14	
9/26/2012	80	93		14	
9/27/2012	86	99		14	
9/28/2012	80	93		14	
9/29/2012	79	92		14	
9/30/2012	79	92		14	
10/1/2012					

Total

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Zweygartd 13-19

St. Francis

St. Francis

Flow

October-12

FloBoss

DATE	Casing PSI	STATIC	MCF	HRS DOWN	REMARKS (Maximum length 110 characters)
10/1/2012	79	92		14	
10/2/2012	79	92		14	
10/3/2012	79	92		13	
10/4/2012	77	90		13	
10/5/2012	77	90		13	
10/6/2012	77	90		13	
10/7/2012	77	90		13	
10/8/2012	78	91		13	
10/9/2012	78	91		13	
10/10/2012	79	92		13	
10/11/2012	79	92		13	
10/12/2012	78	91		13	
10/13/2012	78	91		13	
10/14/2012	81	94		13	
10/15/2012	78	91		13	
10/16/2012	92	105		13	1
10/17/2012	80	93		13	
10/18/2012	76	89		13	
10/19/2012	76	89		13	
10/20/2012	78	91		13	
10/21/2012	76	89		13	
10/22/2012	78	91		13	
10/23/2012	76	89		13	
10/24/2012	76	89		13	
10/25/2012	74	87		13	
10/26/2012	76	89		13	
10/27/2012	75	88		13	
10/28/2012	74	87		13	
10/29/2012	95	108		13	2
10/30/2012	88	101		13	
10/31/2012	75	88		13	

Total

405