

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

Type Test:

(See Instructions on Reverse Side)

- Open Flow **AST**  
 Deliverability

Test Date:  
8/22/2012

API No. 15  
023-21260-0000

Company Rosewood Resources, Inc.		Lease Zweygardt		Well Number 11-19	
County Cheyenne	Location NWNW	Section 19	TWP 3S	RNG (E/W) 40W	Acres Attributed 80
Field Cherry Creek		Reservoir Niobrara		Gas Gathering Connection Branch Systems Inc.	
Completion Date 9/23/2010		Plug Back Total Depth 1418'		Packer Set at	
Casing Size 4 1/2"	Weight 10.5#	Internal Diameter 6.366	Set at 1454'	Perforations 1252'	To 1282'
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) 1464'		Pressure Taps Flange		Gas Gravity - G <sub>g</sub> .6	
				(Meter Run) (Prover) Size 2"	
Pressure Buildup: Shut in 8-21		20 12 at 5:25		(AM) (PM) Taken 8-22	
				20 12 at 5:40 (AM) (PM)	
Well on Line: Started 8-22		20 12 at 5:40		(AM) (PM) Taken 8-23	
				20 12 at 5:55 (AM) (PM)	

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### 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>i</sub> ) or (P <sub>c</sub> )		Tubing Wellhead Pressure (P <sub>w</sub> ) or (P <sub>i</sub> ) or (P <sub>c</sub> )		Duration (Hours)	Liquid Produced (Barrels)
						psig	psia	psig	psia		
Shut-In						207	221.4				
Flow						76	90.4			24	

### FLOW STREAM ATTRIBUTES

Plate Coefficient (F <sub>d</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>
						20		

### (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: P <sub>c</sub> <sup>2</sup> - P <sub>w</sub> <sup>2</sup>	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)  
\_\_\_\_\_  
For Commission

*Gannell Gerwe*  
For Company

\_\_\_\_\_  
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 11-19 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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W2730

Zweygartdt 11-19

St. Francis

St. Francis

Flow

August-12

FloBoss

DATE	Tubing Casing		STATIC MCF	SPM	HRS CYCLE DOWN	Water BBLs	REMARKS (Maximum length 110 characters)
	PSI	PSI					
8/1/2012		77	90	21			
8/2/2012		70	83	21			
8/3/2012		70	83	21			
8/4/2012		68	81	21			
8/5/2012		77	90	21			
8/6/2012		69	82	21			
8/7/2012		78	91	21			
8/8/2012		71	84	21			
8/9/2012		70	83	21			
8/10/2012		83	96	21			
8/11/2012		71	84	20	1.5		
8/12/2012		72	85	20			
8/13/2012		67	80	20			
8/14/2012		69	82	20			
8/15/2012		79	92	20			
8/16/2012		69	82	20			
8/17/2012		70	83	20			
8/18/2012		75	88	20			
8/19/2012		73	86	20			
8/20/2012		67	80	20			
8/21/2012		67	80	20			si for state test cp-71
8/22/2012		<del>67</del> 207	80	0	24		reopened cp-207
8/23/2012		76	89	30			
8/24/2012		76	89	22			
8/25/2012		73	86	20			
8/26/2012		73	86	20			
8/27/2012		69	82	20			
8/28/2012		69	82	20			
8/29/2012		71	84	20			
8/30/2012		70	83	20			
8/31/2012		69	82	20			

Total

622

0

W2730  
 Zwegardt 11-19  
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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	69	82		20	
9/2/2012	72	85		20	
9/3/2012	69	82		20	
9/4/2012	69	82		20	1
9/5/2012	83	96		20	
9/6/2012	83	96		20	
9/7/2012	149	162		6	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	182	195		0	24
9/12/2012	184	197		0	24
9/13/2012	118	131		3	10
9/14/2012	116	129		21	
9/15/2012	111	124		32	
9/16/2012	100	113		27	
9/17/2012	92	105		24	
9/18/2012	75	88		24	
9/19/2012	87	100		22	
9/20/2012	68	81		22	
9/21/2012	68	81		22	
9/22/2012	67	80		21	
9/23/2012	67	80		21	
9/24/2012	68	81		21	
9/25/2012	72	85		21	
9/26/2012	73	86		21	
9/27/2012	79	92		21	
9/28/2012	72	85		20	
9/29/2012	72	85		20	
9/30/2012	72	85		20	
10/1/2012					

Total

509

W2730

Zweygardt 11-19

St. Francis

St. Francis

Flow

October-12

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DATE	Casing PSI	STATIC	MCF	HRS DOWN	REMARKS (Maximum length 110 characters)
10/1/2012	72	85	20		
10/2/2012	72	85	20		
10/3/2012	72	85	20		
10/4/2012	70	83	20		
10/5/2012	70	83	20		
10/6/2012	71	84	20		
10/7/2012	70	83	19		
10/8/2012	70	83	20		
10/9/2012	71	84	20		
10/10/2012	72	85	20		
10/11/2012	71	84	20		
10/12/2012	71	84	20		
10/13/2012	71	84	20		
10/14/2012	74	87	19		
10/15/2012	71	84	19		
10/16/2012	90	103	19	1	
10/17/2012	74	87	19		
10/18/2012	70	83	19		
10/19/2012	70	83	19		
10/20/2012	75	85	19		
10/21/2012	70	83	19		
10/22/2012	72	85	19		
10/23/2012	69	82	19		
10/24/2012	64	77	19		
10/25/2012	67	80	19		
10/26/2012	69	82	19		
10/27/2012	68	81	19		
10/28/2012	68	81	19		
10/29/2012	91	104	19	2	
10/30/2012	82	95	19		
10/31/2012	70	83	19		

Total

601