

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

Type Test:

(See Instructions on Reverse Side)

Open Flow **AST**  
 Deliverability

Test Date:  
5/9/2011

API No. 15  
023-21265-00 - ∞

Company Rosewood Resources, Inc.		Lease Zweygardt		Well Number 33-19	
County Cheyenne	Location NWSE	Section 19	TWP 3S	RNG (E/W) 40W	Acres Attributed 80
Field Cherry Creek		Reservoir Niobrara		Gas Gathering Connection Branch Systems Inc.	
Completion Date 9/28/2010		Plug Back Total Depth 1507'		Packer Set at	
Casing Size 4 1/2"	Weight 10.5#	Internal Diameter 6.366	Set at 1546'	Perforations 1322'	To 1352'
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	
Vertical Depth(H) 1560'		Pressure Taps Flange		Gas Gravity - G <sub>g</sub> .6 (Meter Run) (Prover) Size 2"	
Pressure Buildup: Shut in 5-8		20 11 at 6:00		(AM) <input checked="" type="checkbox"/> (PM) Taken 5-9	
Well on Line: Started 5-9		20 11 at 6:15		(AM) <input checked="" type="checkbox"/> (PM) Taken 5-10	

### 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						157	171.4				
Flow						157	171.4			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>
						37		

### (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>w</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> or (P <sub>c</sub> ) <sup>2</sup> - (P <sub>d</sub> ) <sup>2</sup>	(P <sub>w</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>w</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 28 day of December, 20 11.

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

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

*James C. ...*  
For Company

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

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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 33-19 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: 12/28/11

Signature: *Jannell Gevel*

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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W2749  
 Zwegardt 33-19  
 St. Francis  
 St. Francis  
 Flow  
 May-11  
 FloBoss

DATE	Tubing Casing		STATIC	MCF	SPM	HRS CYCLE DOWN	Water BBLs	REMARKS (Maximum length 110 characters)
	PSI	PSI						
5/1/2011		160	173	36				
5/2/2011		160	173	36				
5/3/2011		160	173	36				
5/4/2011		159	172	39				
5/5/2011		158	171	38				
5/6/2011		158	171	39				
5/7/2011		158	171	39				
5/8/2011		166	179	39				
5/9/2011		157	169	0		24		Compressor Down
5/10/2011		164	177	31				
5/11/2011		164	177	39				
5/12/2011		160	173	39				
5/13/2011		158	171	39				
5/14/2011		162	170	37				
5/15/2011		157	170	37				
5/16/2011		157	170	37				
5/17/2011		156	169	38				
5/18/2011		156	169	38				
5/19/2011		156	169	37				
5/20/2011		156	169	37				
5/21/2011		156	169	37				
5/22/2011		159	173	38				
5/23/2011		156	169	38				
5/24/2011		156	169	37				
5/25/2011		156	169	37				
5/26/2011		155	168	37				
5/27/2011		156	169	37				
5/28/2011		157	170	37				
5/29/2011		157	170	37				
5/30/2011		157	170	37				
5/31/2011		157	170	37				

Total

1120

0

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W2749  
 Zweygartt 33-19  
 St. Francis  
 St. Francis  
 Flow  
 June-11  
 FloBoss

DATE	Tubing Casing		STATIC MCF	SPM	CYCLE DOWN	HRS	Water BBLs	REMARKS (Maximum length 110 characters)
	PSI	PSI						
6/1/2011		161	174	37				
6/2/2011		160	173	39				
6/3/2011		157	170	39				
6/4/2011		157	170	39				
6/5/2011		157	170	38				
6/6/2011		161	174	38				
6/7/2011		153	166	37				
6/8/2011		159	172	38				
6/9/2011		157	170	37				
6/10/2011		158	171	39				
6/11/2011		157	170	39				
6/12/2011		157	170	39				
6/13/2011		157	170	39				
6/14/2011		157	170	39				
6/15/2011		156	169	39				
6/16/2011		158	171	39				
6/17/2011		157	170	39				
6/18/2011		157	170	39				
6/19/2011		157	170	39				
6/20/2011		157	170	39				
6/21/2011		157	170	39				
6/22/2011		157	170	39				
6/23/2011		161	174	39		1		
6/24/2011		158	171	39				
6/25/2011		157	170	39				
6/26/2011		157	170	39				
6/27/2011		157	170	39				
6/28/2011		157	170	39				
6/29/2011		157	170	39				
6/30/2011		157	170	39				
7/1/2011								

Total

1161

0

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W2749  
 Zweygardt 33-19  
 St. Francis  
 St. Francis  
 Flow  
 July-11  
 FloBoss

DATE	Tubing Casing		STATIC MCF	SPM	HRS CYCLE DOWN	Water BBLs	REMARKS (Maximum length 110 characters)
	PSI	PSI					
7/1/2011		158	171	39			
7/2/2011		100	113	39			
7/3/2011		100	113	39			
7/4/2011		101	114	39			
7/5/2011		158	171	39			
7/6/2011		161	174	39			
7/7/2011		158	171	39			
7/8/2011		158	171	39			
7/9/2011		158	171	39			
7/10/2011		158	171	39			
7/11/2011		162	175	39			
7/12/2011		163	176	39			
7/13/2011		155	168	39		1	
7/14/2011		161	174	39			
7/15/2011		161	111	39			
7/16/2011		161	111	39			
7/17/2011		161	111	39			
7/18/2011		161	174	40			
7/19/2011		159	172	40		2	
7/20/2011		158	171	39			
7/21/2011		163	176	39			
7/22/2011		157	170	40			
7/23/2011		157	170	40			
7/24/2011		157	170	39			
7/25/2011		157	170	39			
7/26/2011		157	170	39			
7/27/2011		161	174	40			
7/28/2011		158	171	40			
7/29/2011		162	175	40			
7/30/2011		158	171	40			
7/31/2011		157	170	40			

Total

1218

0

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