

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

(See Instructions on Reverse Side)

Type Test:

- Open Flow  Deliverability

Test Date:  
5/23/2013

API No. 15  
023-21261-0000

Company Rosewood Resources, Inc.			Lease Zweygardt			Well Number 24-19		
County Cheyenne	Location SESW	Section 19	TWP 3S	RNG (E/W) 40W	Acres Attributed 80			
Field Cherry Creek		Reservoir Niobrara		Gas Gathering Connection Branch Systems Inc.				
Completion Date 9/15/2010		Plug Back Total Depth 1465'			Packer Set at			
Casing Size 4 1/2"	Weight 10.5#	Internal Diameter 6.366	Set at 1503'	Perforations 1266'	To 1296'			
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 / <b>No</b>				
Producing Thru (Annulus / Tubing) Annulus		% Carbon Dioxide		% Nitrogen		Gas Gravity - G <sub>g</sub> .6		
Vertical Depth(H) 1515'		Pressure Taps Flange			(Meter Run) (Prover) Size 2"			
Pressure Buildup:	Shut in 5-22	20 13	at 6:10	(AM) (PM) Taken 5-23	20 13	at 6:25	(AM) (PM)	
Well on Line:	Started 5-23	20 13	at 6:25	(AM) (PM) Taken 5-24	20 13	at 6:45	(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						237	251.4				
Flow						60	74.4			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>tt</sub>	Deviation Factor F <sub>pv</sub>	Metered Flow R (Mcf/d)	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: $\frac{P_c^2 - P_w^2}{P_c^2 - P_a^2}$	Backpressure Curve Slope = "n" ----- Assigned Standard Slope	n x LOG [ ]	Antilog	Open Flow Deliverability Equals R x Antilog (Mcf/d)

Open Flow Mcf/d @ 14.65 psia Deliverability Mcf/d @ 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 21 day of November, 20 13.

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Witness (if any)

For Company

For Commission

Checked by

DEC 26 2013

CONSERVATION DIVISION  
WICHITA, KS

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 24-19 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: 11/21/13

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Signature: Samuel Martinez

Title: Production Assistant

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WICHITA, KS

**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.

W2742  
 Zweygardt 24-19  
 St. Francis  
 St. Francis  
 Flow  
 May-13  
 FloBoss

DATE	Casing PSI	STATIC	MCF	HRS DOWN	REMARKS (Maximum length 110 characters)
5/1/2013	64	77		18	
5/2/2013	69	82		18	
5/3/2013	66	79		18	
5/4/2013	61	74		18	
5/5/2013	64	77		18	
5/6/2013	56	69		18	
5/7/2013	60	73		18	
5/8/2013	61	74		18	
5/9/2013	68	81		18	
5/10/2013	74	87		18	
5/11/2013	67	80		18	
5/12/2013	67	80		18	
5/13/2013	69	82		18	
5/14/2013	70	83		18	
5/15/2013	96	109		18	2.5
5/16/2013	81	94		18	
5/17/2013	68	81		18	
5/18/2013	60	73		18	
5/19/2013	69	82		18	
5/20/2013	65	78		18	
5/21/2013	69	82		18	
5/22/2013	81	94		18	14 si for state test - cp 61
5/23/2013	164	177		0	24 reopened - cp 237
5/24/2013	108	121		24	4
5/25/2013	97	110		21	
5/26/2013	92	105		20	
5/27/2013	89	102		20	
5/28/2013	79	92		20	
5/29/2013	71	84		20	
5/30/2013	60	73		19	
5/31/2013	61	74		19	

Total

559

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 WICHITA, KS

W2742  
 Zwegardt 24-19  
 St. Francis  
 St. Francis  
 Flow  
 June-13  
 FloBoss

DATE	Casing PSI	STATIC	MCF	HRS DOWN	REMARKS (Maximum length 110 characters)
6/1/2013	53	66		19	
6/2/2013	57	70		18	
6/3/2013	55	68		18	
6/4/2013	54	67		18	
6/5/2013	59	72		18	
6/6/2013	69	82		18	
6/7/2013	62	75		18	
6/8/2013	57	70		18	
6/9/2013	61	74		18	
6/10/2013	91	104		18	2
6/11/2013	79	92		18	1
6/12/2013	78	91		18	
6/13/2013	61	74		18	
6/14/2013	58	71		18	
6/15/2013	66	79		18	
6/16/2013	65	78		18	
6/17/2013	62	75		18	
6/18/2013	58	71		18	
6/19/2013	55	68		22	
6/20/2013	56	69		21	
6/21/2013	63	76		0	
6/22/2013	77	90		0	
6/23/2013	81	94		0	
6/24/2013	78	91		0	
6/25/2013	85	98		22	
6/26/2013	82	95		16	
6/27/2013	72	85		15	
6/28/2013	56	69		15	
6/29/2013	57	70		15	
6/30/2013	56	69		14	
7/1/2013					

Total

465

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CONSERVATION DIVISION  
 WICHITA, KS

W2742  
 Zwegardt 24-19  
 St. Francis  
 St. Francis  
 Flow  
 July-13  
 FloBoss

DATE	Casing PSI	STATIC MCF	SPM	HRS CYCLEDOWN	Water BBLs	REMARKS (Maximum length 110 characters)
7/1/2013	58	71	15			
7/2/2013	61	74	15			
7/3/2013	57	70	15			
7/4/2013	61	74	14			
7/5/2013	61	74	14			
7/6/2013	62	75	14			
7/7/2013	71	84	14			
7/8/2013	69	82	14			
7/9/2013	68	81	14			
7/10/2013	65	78	14			
7/11/2013	68	81	14			
7/12/2013	74	87	14			
7/13/2013	81	94	14		2.5	
7/14/2013	79	92	14			
7/15/2013	60	73	14			
7/16/2013	58	71	14			
7/17/2013	57	70	14	6	12	bringing water @ 11:00AM
7/18/2013	89	102	19	6	6	pu off hfp
7/19/2013	78	91	24	6	0	0
7/20/2013	79	92	19	6	0	0
7/21/2013	79	92	18	6	0	0
7/22/2013	75	88	18	6	0	0
7/23/2013	77	90	17	6	12	23
7/24/2013	88	101	26	6	24	46 3.75 min bt
7/25/2013	93	106	36	6	12	23 pu off hfp
7/26/2013	79	92	33	6	12	23 restarted pu
7/27/2013	96	109	44	6	24	46
7/28/2013	110	123	56	6	24	45
7/29/2013	122	135	65	6	24	46
7/30/2013	138	151	72	6	12	3.5 23 pu off hfp
7/31/2013	131	144	60	6	0	5.5 0

Total

748

275

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