

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

Type Test:

- Open Flow **ASI**  
 Deliverability

(See Instructions on Reverse Side)

Test Date:  
6/22/14

API No. 15  
023-21251-0000

Company Rosewood Resources, Inc.		Lease Zwegardt		Well Number 43-24	
County Cheyenne	Location NESE	Section 24	TWP 3S	RNG (E/W) 41W	Acres Attributed 80
Field Cherry Creek		Reservoir Niobrara		Gas Gathering Connection Branch Systems Inc.	
Completion Date 9/27/2010		Plug Back Total Depth 1507'		Packer Set at	
Casing Size 4 1/2"	Weight 10.5#	Internal Diameter 6.366	Set at 1547'	Perforations 1320'	To 1350'
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 6-7		20 14 at 5:30		(AM) (PM) Taken 6-12	
Well on Line: Started 6-22		20 14 at 5:45		(AM) (PM) Taken 6-23	
				20 14 at 6:10 (AM) (PM)	

### OBSERVED SURFACE DATA

Duration of Shut-in 360 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>c</sub> ) or (P <sub>e</sub> )		Tubing Wellhead Pressure (P <sub>w</sub> ) or (P <sub>c</sub> ) or (P <sub>e</sub> )		Duration (Hours)	Liquid Produced (Barrels)
						psig	psia	psig	psia		
Shut-In						225	239.4				
Flow						72	86.4			360	

### FLOW STREAM ATTRIBUTES

Plate Coefficient (F <sub>p</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 (Mcfd)	GOR (Cubic Feet/ Barrel)	Flowing Fluid Gravity G <sub>m</sub>
						17		

### (OPEN FLOW) (DELIVERABILITY) CALCULATIONS

(P<sub>c</sub>)<sup>2</sup> = \_\_\_\_\_ ; (P<sub>w</sub>)<sup>2</sup> = \_\_\_\_\_ ; P<sub>a</sub> = \_\_\_\_\_ % (P<sub>c</sub> - 14.4) + 14.4 = \_\_\_\_\_ ; (P<sub>e</sub>)<sup>2</sup> = 0.207 ; (P<sub>e</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>w</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>w</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: $P_c^2 - P_w^2$	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 12 day of December, 20 14.

Received  
KANSAS CORPORATION COMMISSION

Witness (if any) \_\_\_\_\_ For Commission \_\_\_\_\_

For Company Jonall Martney  
Checked by \_\_\_\_\_

**FEB 25 2015**  
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 43-24 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: 12/12/14

Received  
KANSAS CORPORATION COMMISSION

Signature: *David Martney*

Title: Production Assistant

FEB 25 2015

CONSERVATION DIVISION  
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.

W2732  
 Zweygartd 43-24  
 St. Francis  
 St. Francis  
 Flow  
 June-1~~0~~4  
 FloBoss

DATE	Casing PSI	STATIC	MCF	HRS DOWN	REMARKS (Maximum length 110 characters)
6/1/2013 <sup>4</sup>	79	92		17	0
6/2/2013	85	98		19	0
6/3/2013	79	92		19	0
6/4/2013	92	105		18	0
6/5/2013	75	88		20	0
6/6/2013	76	89		19	0
6/7/2013	175	188		12	9
6/8/2013	188	201		0	24
6/9/2013	201	214		0	24
6/10/2013	213	226		0	24
6/11/2013	222	235		0	24
6/12/2013	225	238		0	24
6/13/2013	215	228		0	24
6/14/2013	207	220		0	24
6/15/2013	197	210		0	24
6/16/2013	190	203		0	24
6/17/2013	183	196		0	24
6/18/2013	175	188		0	24
6/19/2013	168	181		0	24
6/20/2013	166	179		0	24
6/21/2013	166	179		0	24
6/22/2013	135	148		0	24
6/23/2013	150	163		23	5
6/24/2013	143	156		32	0
6/25/2013	135	148		32	0
6/26/2013	114	127		27	0
6/27/2013	109	122		27	0
6/28/2013	87	100		24	0
6/29/2013	81	94		22	0
6/30/2013	82	95		22	0
7/1/2013					0

Total

333

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 KANSAS CORPORATION COMMISSION  
**FEB 25 2015**  
 CONSERVATION DIVISION  
 WICHITA, KS

W2732  
 Zweygardt 43-24  
 St. Francis  
 St. Francis  
 Flow  
 July-14  
 FloBoss

DATE	Casing PSI	STATIC	MCF	HRS DOWN	REMARKS (Maximum length 110 characters)
7/1/2014	80	93		22	0
7/2/2014	79	92		21	0
7/3/2014	79	92		20	0
7/4/2014	79	92		20	0
7/5/2014	79	92		20	0
7/6/2014	78	91		19	0
7/7/2014	88	101		19	0
7/8/2014	78	91		19	0
7/9/2014	79	92		19	0
7/10/2014	79	92		19	0
7/11/2014	84	97		19	0
7/12/2014	80	93		19	0
7/13/2014	80	93		18	0
7/14/2014	81	94		18	0
7/15/2014	73	86		19	0
7/16/2014	75	88		19	0
7/17/2014	75	88		19	0
7/18/2014	76	89		19	0
7/19/2014	74	87		19	0
7/20/2014	74	87		18	0
7/21/2014	143	156		18	0
7/22/2014	151	164		3	22
7/23/2014	99	112		22	7
7/24/2014	72	85		19	3
7/25/2014	73	86		17	4
7/26/2014	72	85		17	0
7/27/2014	72	85		17	0
7/28/2014	72	85		17	0
7/29/2014	74	87		17	0
7/30/2014	73	86		17	0
7/31/2014	77	90		17	0

Total

566

Received  
 KANSAS CORPORATION COMMISSION

FEB 25 2015

CONSERVATION DIVISION  
 WICHITA, KS

W2732  
 Zweygardt 43-24  
 St. Francis  
 St. Francis  
 Flow  
 August-14  
 FloBoss

DATE	Casing PSI	STATIC	MCF	HRS DOWN	REMARKS (Maximum length 110 characters)
8/1/2014	73	86		17	0
8/2/2014	72	85		17	0
8/3/2014	72	85		17	0
8/4/2014	72	85		17	0
8/5/2014	72	85		17	0
8/6/2014	73	86		17	0
8/7/2014	73	86		16	0
8/8/2014	74	87		17	0
8/9/2014	75	88		16	0
8/10/2014	75	88		16	0
8/11/2014	80	93		16	0
8/12/2014	71	84		16	0
8/13/2014	72	85		16	0
8/14/2014	71	84		16	0
8/15/2014	77	90		16	3
8/16/2014	75	88		16	0
8/17/2014	76	89		16	0
8/18/2014	75	88		16	0
8/19/2014	81	94		16	2
8/20/2014	74	87		16	0
8/21/2014	75	88		16	0
8/22/2014	79	92		16	0
8/23/2014	70	83		16	0
8/24/2014	71	84		16	0
8/25/2014	87	100		16	0
8/26/2014	72	85		16	0
8/27/2014	79	92		16	0
8/28/2014	95	108		16	0
8/29/2014	70	83		16	5
8/30/2014	70	83		16	0
8/31/2014	78	91		16	0

Total

503

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 WICHITA, KS