

# KANSAS CORPORATION COMMISSION

## ONE POINT STABILIZED OPEN FLOW OR DELIVERABILITY TEST

Type Test:

- Open Flow **BSI**  
 Deliverability

(See Instructions on Reverse Side)

Test Date:  
6/22/14

API No. 15  
023-20607-0000

Company Rosewood Resources, Inc.		Lease Zweygardt		Well Number 2-24	
County Cheyenne	Location NE NE/4	Section 24	TWP 3S	RNG (E/W) 41W	Acres Attributed 80
Field Cherry Creek		Reservoir Niobrara		Gas Gathering Connection Branch Systems Inc.	
Completion Date 5/4/2005		Plug Back Total Depth 1425'		Packer Set at	
Casing Size 4 1/2"	Weight 10.5#	Internal Diameter 4.052	Set at 1425'	Perforations 1202'	To 1236'
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? <input checked="" type="checkbox"/> Yes / No Pumping Unit	
Producing Thru (Annulus / Tubing) Annulus		% Carbon Dioxide		% Nitrogen	
Vertical Depth(H) 1236'		Pressure Taps Flange		(Meter Run) (Prover) Size 2"	
Pressure Buildup: Shut in 6-7		20 14 at 9:45		(AM) (PM) Taken 6-21	
Well on Line: Started 6-22		20 14 at 10:00		(AM) (PM) Taken 6-23	
		20 14 at 10:00		(AM) (PM)	
		20 14 at 10:45		(AM) (PM)	

### OBSERVED SURFACE DATA

Duration of Shut-in 360 Hours

Static / Dynamic Property	Orifice Size (inches)	Circle one: Meter 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						149	163.4				
Flow						60	74.4			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>t</sub>	Deviation Factor F <sub>pv</sub>	Metered Flow R (Mcf/d)	GOR (Cubic Feet/ Barrel)	Flowing Fluid Gravity G <sub>m</sub>
						21		

### (OPEN FLOW) (DELIVERABILITY) CALCULATIONS

(P<sub>c</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> = \_\_\_\_\_ : P<sub>d</sub> = \_\_\_\_\_ % (P<sub>c</sub> - 14.4) + 14.4 = \_\_\_\_\_

(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: $\left[ \frac{P_c^2 - P_w^2}{P_c^2 - P_a^2} \right]$	Backpressure Curve Slope = "n" Assigned Standard Slope	n x LOG $\left[ \frac{P_c^2 - P_w^2}{P_c^2 - P_a^2} \right]$	Antilog	Open Flow Deliverability Equals R x Antilog (Mcf/d)

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

*Janell Martiney*  
For Company

Witness (if any)

FEB 25 2015

For Commission

Checked by

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 2-24 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.

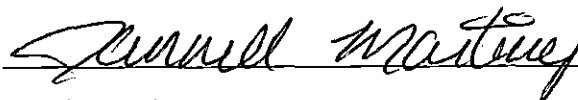
Date: 12/12/14

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FEB 25 2015

CONSERVATION DIVISION  
WICHITA, KS

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.

W386

Zweygart 02-24

St. Francis

St. Francis

None

June-13<sup>4</sup>

FloBoss

DATE	Casing			HRS		REMARKS (Maximum length 110 characters)
	PSI	STATIC	MCF	DOWN		
6/1/2013 <sup>4</sup>	56	69		17	0	
6/2/2013	60	73		16	0	
6/3/2013	76	89		17	0	0 turn on pumping unit
6/4/2013	67	80		16	0	
6/5/2013	50	63		16	0	
6/6/2013	53	66		16	0	0 turn off pumping unit
6/7/2013	132	145		9	9	
6/8/2013	136	149		0	24	
6/9/2013	139	152		0	24	
6/10/2013	140	153		0	24	
6/11/2013	142	155		0	24	
6/12/2013	143	156		0	24	
6/13/2013	144	157		0	24	
6/14/2013	144	157		0	24	
6/15/2013	144	157		0	24	
6/16/2013	145	158		0	24	
6/17/2013	146	159		0	24	
6/18/2013	147	160		0	24	
6/19/2013	147	160		0	24	
6/20/2013	148	161		0	24	
6/21/2013	149	162		0	24	
6/22/2013	149	162		0	24	
6/23/2013	119	132		22	5	
6/24/2013	110	123		7	0	
6/25/2013	104	117		26	0	
6/26/2013	92	105		23	0	
6/27/2013	86	99		21	0	
6/28/2013	57	70		21	0	
6/29/2013	56	69		20	0	0 started pumping unit
6/30/2013	57	70		20	0	0 very little water, put on hand
7/1/2013					0	

Total

267

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WICHITA, KS

W386

Zweygardt 02-24

St. Francis

St. Francis

None

July-14

FloBoss

DATE	Casing PSI	STATIC	MCF	HRS DOWN	Water BBLs	REMARKS (Maximum length 110 characters)
7/1/2014	57	70		19	0	0
7/2/2014	57	70		18	0	0
7/3/2014	58	71		18	0	0
7/4/2014	58	71		18	0	0
7/5/2014	58	71		18	0	0
7/6/2014	58	71		18	0	0
7/7/2014	68	81		16	0	0
7/8/2014	59	72		16	0	0
7/9/2014	60	73		16	0	0
7/10/2014	61	74		16	0	0
7/11/2014	64	77		16	0	0 little water, put on auto
7/12/2014	63	76		16	0	4
7/13/2014	64	77		16	0	5 Pumping gray sludge, shut off
7/14/2014	88	101		16	0	0
7/15/2014	55	68		16	0	0
7/16/2014	51	64		16	0	0
7/17/2014	58	71		16	0	0
7/18/2014	59	72		16	0	0
7/19/2014	55	68		16	0	0
7/20/2014	56	69		13	0	0
7/21/2014	134	147		13	0	0
7/22/2014	133	145		1	22	0
7/23/2014	81	94		16	7	0
7/24/2014	64	77		16	3	0
7/25/2014	55	68		16	4	0
7/26/2014	54	67		14	0	0 started pumping unit
7/27/2014	55	68		16	0	4
7/28/2014	55	68		16	0	18 good water
7/29/2014	55	68		17	0	20
7/30/2014	57	70		17	0	20
7/31/2014	57	70		18	0	19

Total

490

90

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WICHITA, KS

W386

Zweygardt 02-24

St. Francis

St. Francis

None

August-14

FloBoss

DATE	Casing			SPM	CYCLE	HRS DOWN	Water BBLs	REMARKS (Maximum length 110 characters)
	PSI	STATIC	MCF					
8/1/2014	56	69	18	8	12	0	16	
8/2/2014	55	68	18	8	12	0	16	5 min BT
8/3/2014	55	68	19	8	12	0	16	
8/4/2014	55	68	19	8	12	0	16	
8/5/2014	57	70	19	8	12	0	16	
8/6/2014	57	70	20	8	12	0	16	
8/7/2014	59	72	21	8	12	0	16	
8/8/2014	59	72	21	8	12	0	16	
8/9/2014	60	73	21	8	12	0	16	
8/10/2014	60	73	21	8	12	0	16	
8/11/2014	67	80	21	8	12	0	16	
8/12/2014	56	69	22	8	12	0	16	
8/13/2014	57	70	22	8	12	0	16	
8/14/2014	55	68	22	8	12	0	16	
8/15/2014	61	74	24	8	12	3	16	
8/16/2014	59	72	26	8	12	0	16	
8/17/2014	61	74	26	8	12	0	16	
8/18/2014	68	81	25	8	12	0	16	
8/19/2014	68	81	25	8	12	2	16	
8/20/2014	59	72	25	8	12	0	16	
8/21/2014	58	71	25	8	12	0	16	
8/22/2014	61	74	25	8	12	0	16	
8/23/2014	55	68	25	8	12	0	16	
8/24/2014	57	70	26	8	12	0	16	
8/25/2014	72	85	26	8	12	0	16	
8/26/2014	58	71	26	8	12	0	16	
8/27/2014	61	74	26	8	12	0	16	
8/28/2014	115	128	26	8	12	0	8	
8/29/2014	54	67	24	8	12	5	8	
8/30/2014	54	67	27	8	12	0	16	
8/31/2014	67	80	27	8	12	0	16	

Total

718

480

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