

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

(See Instructions on Reverse Side)

Type Test:

- Open Flow  Deliverability

Test Date:  
6/22/14

API No. 15  
023-21254-0000

Company Rosewood Resources, Inc.		Lease Zweygardt			Well Number 12-19
County Cheyenne	Location SWNW	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 1470'		Packer Set at	
Casing Size 4 1/2"	Weight 10.5#	Internal Diameter 6.366	Set at 1509'	Perforations 1304'	To 1334'
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	
Producing Thru (Annulus / Tubing) Annulus		% Carbon Dioxide		% Nitrogen	
Vertical Depth(H) 1550'		Pressure Taps Flange			(Meter Run) (Prover) Size 2"
Pressure Buildup: Shut in 6-7		20 14 at 5:20		(AM) (PM) Taken 6-12	
Well on Line: Started 6-22		20 14 at 5:30		(AM) (PM) Taken 6-23	
		20 14 at 5:30		(AM) (PM) Taken 6-23	

### 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>1</sub> ) or (P <sub>c</sub> )		Tubing Wellhead Pressure (P <sub>w</sub> ) or (P <sub>1</sub> ) or (P <sub>c</sub> )		Duration (Hours)	Liquid Produced (Barrels)
						psig	psia	psig	psia		
Shut-In						223	237.4				
Flow						64	78.4			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>
						13		

### (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>e</sub>)<sup>2</sup> = 0.207 ; (P<sub>d</sub>)<sup>2</sup> = \_\_\_\_\_

(P <sub>e</sub> ) <sup>2</sup> - (P <sub>g</sub> ) <sup>2</sup> or (P <sub>c</sub> ) <sup>2</sup> - (P <sub>g</sub> ) <sup>2</sup>	(P <sub>e</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: $\frac{P_c^2 - P_w^2}{P_c^2 - P_w^2}$	Backpressure Curve Slope = "n" ----- or ----- Assigned Standard Slope	n x LOG [ ]	Antilog	Open Flow Deliverability Equals R x Antilog (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

For Company *Small Martiny*

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

FEB 25 2015

For Commission \_\_\_\_\_      Checked by \_\_\_\_\_

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 12-19 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: 12/12/14

Received  
KANSAS CORPORATION COMMISSION

Signature: \_\_\_\_\_

*Jarrell Mastney*

FEB 25 2015

Title: Production Assistant

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.

W2733

Zweygardt 12-19

St. Francis

St. Francis

Flow

June-1~~st~~

FloBoss

DATE	Casing PSI	STATIC	MCF	HRS DOWN	REMARKS (Maximum length 110 characters)
6/1/2013	65	78		16	0
6/2/2013	71	84		14	0
6/3/2013	64	77		15	0
6/4/2013	80	93		14	0
6/5/2013	61	74		16	0
6/6/2013	62	75		14	0
6/7/2013	176	189		8	9
6/8/2013	189	202		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	223	236		0	24
6/13/2013	220	233		0	24
6/14/2013	218	231		0	24
6/15/2013	215	228		0	24
6/16/2013	213	226		0	24
6/17/2013	210	223		0	24
6/18/2013	206	219		0	24
6/19/2013	203	216		0	24
6/20/2013	201	214		0	24
6/21/2013	194	207		0	24
6/22/2013	194	207		0	24
6/23/2013	146	159		23	5
6/24/2013	127	140		36	0
6/25/2013	117	130		25	0
6/26/2013	104	117		21	0
6/27/2013	98	111		21	0
6/28/2013	75	88		20	0
6/29/2013	67	80		18	0
6/30/2013	69	82		18	0
7/1/2013					0

Total

279

Received  
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FEB 25 2015

CONSERVATION DIVISION  
WICHITA, KS

W2733

Zweygardt 12-19

St. Francis

St. Francis

Flow

July-14

FloBoss

DATE	Casing PSI	STATIC	MCF	HRS DOWN	REMARKS (Maximum length 110 characters)
7/1/2014	69	82		17	0
7/2/2014	67	80		17	0
7/3/2014	66	79		16	0
7/4/2014	66	79		16	0
7/5/2014	69	82		16	0
7/6/2014	69	82		16	0
7/7/2014	77	90		15	0
7/8/2014	68	81		15	0
7/9/2014	68	81		15	0
7/10/2014	69	82		15	0
7/11/2014	73	86		15	0
7/12/2014	71	84		15	0
7/13/2014	71	84		14	0
7/14/2014	72	85		14	0
7/15/2014	63	76		15	0
7/16/2014	66	79		15	0
7/17/2014	65	78		15	0
7/18/2014	66	79		15	0
7/19/2014	63	76		15	0
7/20/2014	65	78		14	0
7/21/2014	142	155		14	0
7/22/2014	149	162		4	22
7/23/2014	90	103		18	7
7/24/2014	61	74		15	3
7/25/2014	63	76		15	4
7/26/2014	62	75		13	0
7/27/2014	63	76		13	0
7/28/2014	63	76		13	0
7/29/2014	64	77		13	0
7/30/2014	63	76		13	0
7/31/2014	68	81		13	0

Total

449

Received  
KANSAS CORPORATION COMMISSION

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CONSERVATION DIVISION  
WICHITA, KS

W2733

Zweygartd 12-19

St. Francis

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Flow

August-14

FloBoss

DATE	Casing PSI	STATIC	MCF	HRS DOWN	REMARKS (Maximum length 110 characters)
8/1/2014	63	76		13	0
8/2/2014	63	76		13	0
8/3/2014	63	76		13	0
8/4/2014	64	77		13	0
8/5/2014	63	76		13	0
8/6/2014	65	78		13	0
8/7/2014	64	77		13	0
8/8/2014	65	78		13	0
8/9/2014	66	79		13	0
8/10/2014	67	80		13	0
8/11/2014	73	86		13	0
8/12/2014	62	75		13	0
8/13/2014	63	76		13	0
8/14/2014	62	75		13	0
8/15/2014	69	82		13	3
8/16/2014	66	79		13	0
8/17/2014	68	81		13	0
8/18/2014	67	80		13	0
8/19/2014	73	86		13	2
8/20/2014	66	79		13	0
8/21/2014	64	77		13	0
8/22/2014	76	89		13	0
8/23/2014	61	74		13	0
8/24/2014	63	76		12	0
8/25/2014	80	93		12	0
8/26/2014	64	77		12	0
8/27/2014	73	86		12	0
8/28/2014	96	109		12	0
8/29/2014	61	74		12	5
8/30/2014	60	73		12	0
8/31/2014	71	84		12	0

Total

395

Received  
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FEB 25 2015

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WICHITA, KS