

# KANSAS CORPORATION COMMISSION

## ONE POINT STABILIZED OPEN FLOW OR DELIVERABILITY TEST

Type Test:

(See Instructions on Reverse Side)

- Open Flow **AST**
- Deliverability

Test Date:  
7/9/2015

API No. 15  
023-20663-0000

Company Rosewood Resources, Inc.		Lease R. Walter		Well Number 32-21	
County Cheyenne	Location SWNE	Section 21	TWP 3S	RNG (E/W) 41W	Acres Attributed 80
Field Cherry Creek		Reservoir Niobrara		Gas Gathering Connection Branch Systems Inc.	
Completion Date 3/12/2006		Plug Back Total Depth 1548'		Packer Set at	
Casing Size 4 1/2"	Weight 10.5#	Internal Diameter 4.052	Set at 1549'	Perforations 1370'	To 1402'
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="radio"/> Yes / No Pumping Unit	
Producing Thru (Annulus / Tubing) Annulus		% Carbon Dioxide		% Nitrogen	
Vertical Depth(H) 1402'		Pressure Taps Flange		(Meter Run) (Prover) Size 2"	
Pressure Buildup: Shut in 7-9		20 15 at 10:45		<input checked="" type="radio"/> (AM) <input type="radio"/> (PM) Taken 7-10	
Well on Line: Started 7-10		20 15 at 10:55		<input checked="" type="radio"/> (AM) <input type="radio"/> (PM) Taken 7-11	
				20 15 at 10:55 <input checked="" type="radio"/> (AM) <input type="radio"/> (PM)	
				20 15 at 11:45 <input type="radio"/> (AM) <input checked="" type="radio"/> (PM)	

### OBSERVED SURFACE DATA

Duration of Shut-in 24 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>i</sub> ) or (P <sub>c</sub> )		Tubing Wellhead Pressure (P <sub>w</sub> ) or (P <sub>i</sub> ) or (P <sub>c</sub> )		Duration (Hours)	Liquid Produced (Barrels)
						psig	psia	psig	psia		
Shut-In						173	187.4				
Flow						38	52.4			24	

### FLOW STREAM ATTRIBUTES

Plate Coefficient (F <sub>s</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>
						18		

### (OPEN FLOW) (DELIVERABILITY) CALCULATIONS

(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>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: $\frac{P_c^2 - P_w^2}{P_c^2 - P_a^2}$	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 18 day of December, 20 15.

KCC WICHITA For Company

Witness (if any) \_\_\_\_\_ For Commission      APR 07 2016      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 R. Walter 32-21 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: 12/18/15

**KCC WICHITA**

**APR 07 2016**

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Signature: *Jamall Moustey*

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.

W371

R/Water 32-21

St. Francis

St. Francis

Pumping Unit

July-15

DATE	Tubing PSI	Casing PSI	STATIC	MCF	SPM	CYCLE	HRS DOWN	Water BBLs	REMARKS (Maximum length 110 characters)
7/1/2015		38	52	18	6	6	9.5	0	7
7/2/2015		38	52	18	6	6	9.5	0	7
7/3/2015		38	52	18	6	6	9.5	0	7
7/4/2015		38	52	18	6	6	9.5	0	7
7/5/2015		38	52	17	6	6	9.5	0	7
7/6/2015		38	59	18	6	6	9.5	2	7
7/7/2015		38	51	18	6	6	9.5	0	7
7/8/2015		38	51	18	6	6	9.5	16	7 turn off p u
7/9/2015		54	85	6	6	6	9.5	24	0
7/10/2015		173	93	6	6	6	9.5	14	0
7/11/2015		76	96	7	6	6	9.5	0	0
7/12/2015		65	85	17	6	6	9.5	0	0 Turned PU back on
7/13/2015		46	73	25	6	6	9.5	0	7
7/14/2015		39	55	22	6	6	9.5	0	7
7/15/2015		39	51	20	6	6	9.5	0	7
7/16/2015		39	52	19	6	6	9.5	0	7
7/17/2015		39	51	19	6	6	9.5	0	7
7/18/2015		38	51	19	6	6	9.5	0	7
7/19/2015		38	51	18	6	6	9.5	0	7
7/20/2015		38	50	18	6	6	9.5	0	7
7/21/2015		39	62	18	6	6	9.5	2	7
7/22/2015		38	52	19	6	6	9.5	0	7
7/23/2015		38	51	19	6	6	9.5	0	7
7/24/2015		38	51	18	6	6	9.5	0	7
7/25/2015		38	50	16	6	6	9.5	0	7
7/26/2015		38	50	16	6	6	9.5	0	7
7/27/2015		37	50	16	6	6	9.5	0	0 pu off, no water
7/28/2015		31	49	16	6	6	9.5	0	0
7/29/2015		31	49	16	6	6	9.5	0	0
7/30/2015		31	49	15	6	6	9.5	0	0
7/31/2015		31	49	15	6	6	9.5	0	0

Total

523

154

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W371

R. Walter, 52-20

St. Francis

St. Francis

Pumping Unit

August-15

DATE	Tubing PSI	Casing PSI	STATIC	MCF	SPM	CYCLE	HRS DOWN	Water BBLs	REMARKS (Maximum length 110 characters)
8/1/2015		37	50		17	6	9.5	0	7
8/2/2015		38	51		18	6	9.5	0	7
8/3/2015		39	52		18	6	9.5	0	7
8/4/2015		37	50		19	6	9.5	0	7
8/5/2015		37	50		19	6	9.5	0	7
8/6/2015		37	50		19	6	9.5	0	7
8/7/2015		37	50		18	6	9.5	0	7
8/8/2015		37	50		18	6	9.5	0	7
8/9/2015		37	50		18	6	9.5	0	7
8/10/2015		37	50		18	6	9.5	0	7
8/11/2015		37	50		18	6	9.5	0	7
8/12/2015		37	50		18	6	9.5	0	7
8/13/2015		38	51		18	6	9.5	0	7
8/14/2015		38	51		17	6	9.5	0	7
8/15/2015		39	52		17	6	9.5	0	7
8/16/2015		41	54		17	6	9.5	0	7
8/17/2015		39	52		17	6	9.5	0	7
8/18/2015		39	52		17	6	9.5	0	7
8/19/2015		40	53		16	6	9.5	0	7
8/20/2015		40	53		17	6	9.5	0	7
8/21/2015		40	53		17	6	9.5	0	7
8/22/2015		41	54		16	6	9.5	0	7
8/23/2015		42	55		16	6	9.5	0	7
8/24/2015		42	55		16	6	9.5	0	7
8/25/2015		43	56		16	6	9.5	0	7
8/26/2015		41	54		18	6	9.5	0	7
8/27/2015		40	53		17	6	9.5	0	7
8/28/2015		39	52		17	6	9.5	0	7
8/29/2015		42	55		16	6	9.5	0	7
8/30/2015		45	58		15	6	9.5	0	7
8/31/2015		48	61		16	6	9.5	0	7

Total

534

217

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W371

RWalter3221

St. Francis

St. Francis

Pumping Unit

September-15

DATE	Tubing PSI	Casing PSI	STATIC	MCF	SPM	CYCLE	HRS DOWN	Water BBLs	REMARKS (Maximum length 110 characters)
9/1/2015		58	71	15	6	9.5	0	7	
9/2/2015		36	49	20	6	9.5	0	7	
9/3/2015		35	48	18	6	9.5	0	7	
9/4/2015		38	51	17	6	9.5	0	7	
9/5/2015		44	57	15	6	9.5	0	7	
9/6/2015		48	61	16	6	9.5	0	7	
9/7/2015		47	60	16	6	9.5	0	7	
9/8/2015		46	59	16	6	9.5	0	7	
9/9/2015		46	59	18	6	9.5	0	7	
9/10/2015		37	50	18	6	9.5	0	7	
9/11/2015		41	54	16	6	9.5	0	7	
9/12/2015		43	56	16	6	9.5	0	7	
9/13/2015		42	55	16	6	9.5	0	7	
9/14/2015		44	57	16	6	9.5	0	7	
9/15/2015		45	58	16	6	9.5	0	7	
9/16/2015		47	60	16	6	9.5	0	7	
9/17/2015		48	61	16	6	9.5	0	7	
9/18/2015		48	61	16	6	9.5	0	7	
9/19/2015		44	57	16	6	9.5	0	7	
9/20/2015		42	55	15	6	9.5	0	7	
9/21/2015		44	57	15	6	9.5	0	7	
9/22/2015		46	59	15	6	9.5	0	7	
9/23/2015		47	60	16	6	9.5	0	7	
9/24/2015		0	60	16	6	9.5	0	7	
9/25/2015		0	60	16	6	9.5	0	7	
9/26/2015		0	60	16	6	9.5	0	7	
9/27/2015		0	60	16	6	9.5	0	7	
9/28/2015		0	60	16	6	9.5	0	7	
9/29/2015		0	60	16	6	9.5	0	7	
9/30/2015		0	60	16	6	9.5	0	7	
10/1/2015		0	0	0	0	0	0	0	

Total

486

210

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