

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

Type Test:

- Open Flow *AST*  
 Deliverability

(See Instructions on Reverse Side)

Test Date:  
5/9/2013

API No. 15  
023-20429-01-00

Company Rosewood Resources		Lease Bucholtz		Well Number 2-15H	
County Cheyenne	Location NESE	Section 15	TWP 3S	RNG (E/W) 41W	Acres Attributed 80
Field Cherry Creek		Reservoir Niobrara		Gas Gathering Connection Branch Systems Inc.	
Completion Date 7-9-2001		Plug Back Total Depth 2803'		Packer Set at	
Casing Size 7"	Weight 20#	Internal Diameter 6.456	Set at 1579'	Perforations 1579' MD	To 2803'MD
Tubing Size none	Weight	Internal Diameter	Set at	Perforations	To
Type Completion (Describe) Single (Horizontal)		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) 1579'		Pressure Taps Flange		Gas Gravity - G <sub>g</sub> .6 (Meter Run) (Prover) Size 2"	
Pressure Buildup:	Shut in 5-8	20 13	at 10:55	<input checked="" type="radio"/> (AM) (PM) Taken 5-9	20 13
					at 11:05 <input checked="" type="radio"/> (AM) (PM)
Well on Line:	Started 5-9	20 13	at 11:05	<input checked="" type="radio"/> (AM) (PM) Taken 5-10	20 13
					at 11:55 <input checked="" type="radio"/> (AM) (PM)

### OBSERVED SURFACE DATA

Duration of Shut-in 24 Hours

Static / Dynamic Property	Orifice Size (inches)	Circle one: Meter or 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						69	83.4				
Flow						60	74.4			24	0

### 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>
						2		

### (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 (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 21 day of November, 20 13.

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

*Jannell Maitre*  
\_\_\_\_\_  
For Company

**KCC WICHITA**

\_\_\_\_\_  
Checked by

**DEC 26 2013**

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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 Bucholtz 2-15H 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

Signature: *Janell Martinez*

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.

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W344  
 Bucholtz 02-15H  
 St. Francis  
 St. Francis  
 Pumping Unit/Gas  
 May-13

DATE	Casing PSI	STATIC	MCF	HRS DOWN	REMARKS (Maximum length 110 characters)
5/1/2013	51	64		1	
5/2/2013	58	71		1	
5/3/2013	48	61		3	
5/4/2013	43	56		2	
5/5/2013	46	59		2	
5/6/2013	44	57		2	
5/7/2013	44	57		2	
5/8/2013	61	74		2	si for state test - cp 62
5/9/2013	38	51		0	24 reopened - cp 69
5/10/2013	60	73		2	
5/11/2013	58	71		2	
5/12/2013	56	69		2	
5/13/2013	57	70		2	
5/14/2013	60	73		2	
5/15/2013	100	113		2	2.5
5/16/2013	67	80		0	
5/17/2013	56	69		0	
5/18/2013	49	62		2	
5/19/2013	60	73		2	
5/20/2013	55	68		2	
5/21/2013	36	49		2	
5/22/2013	50	63		2	14
5/23/2013	165	178		0	10
5/24/2013	102	115		0	4
5/25/2013	92	105		0	
5/26/2013	84	97		0	
5/27/2013	80	93		1	
5/28/2013	77	90		1	
5/29/2013	61	74		4	
5/30/2013	54	67		2	
5/31/2013	52	65		2	

Total 47

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W344  
 Bucholtz 02-15H  
 St. Francis  
 St. Francis  
 Pumping Unit/Gas  
 June-13

DATE	Casing PSI	STATIC	MCF	HRS DOWN	REMARKS (Maximum length 110 characters)
6/1/2013	40	53		3	
6/2/2013	45	58		3	
6/3/2013	42	55		3	
6/4/2013	41	54		2	
6/5/2013	55	68		2	
6/6/2013	62	75		2	
6/7/2013	42	55		2	
6/8/2013	42	55		2	
6/9/2013	43	56		2	
6/10/2013	42	55		2	2
6/11/2013	71	84		0	1
6/12/2013	73	86		0	
6/13/2013	50	63		3	
6/14/2013	51	64		3	
6/15/2013	53	66		3	
6/16/2013	54	67		3	
6/17/2013	50	63		2	
6/18/2013	41	54		2	
6/19/2013	38	51		4	
6/20/2013	40	53		1	calibrated meter
6/21/2013	46	59		2	
6/22/2013	62	75		2	
6/23/2013	74	87		2	
6/24/2013	73	86		1	
6/25/2013	76	89		1	
6/26/2013	73	86		1	
6/27/2013	61	74		1	
6/28/2013	46	59		4	
6/29/2013	47	60		4	
6/30/2013	46	59		4	
7/1/2013					

Total

66

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W344  
 Bucholtz 02-15H  
 St. Francis  
 St. Francis  
 Pumping Unit/Gas  
 July-13

DATE	Casing PSI	STATIC	MCF	HRS DOWN	REMARKS (Maximum length 110 characters)
7/1/2013	47	60		2	
7/2/2013	47	60		2	
7/3/2013	49	62		2	
7/4/2013	47	60		2	
7/5/2013	47	60		2	
7/6/2013	47	60		2	
7/7/2013	59	72		2	
7/8/2013	59	72		2	
7/9/2013	61	74		2	
7/10/2013	57	70		3	
7/11/2013	57	70		2	
7/12/2013	64	77		2	
7/13/2013	71	82		1	2.5
7/14/2013	72	85		1	
7/15/2013	52	65		1	
7/16/2013	50	63		3	
7/17/2013	52	65		2	
7/18/2013	65	78		2	
7/19/2013	71	84		2	
7/20/2013	66	79		1	
7/21/2013	65	78		1	
7/22/2013	68	81		2	
7/23/2013	57	70		2	
7/24/2013	65	78		2	
7/25/2013	71	84		1	
7/26/2013	58	71		1	
7/27/2013	48	60		1	
7/28/2013	48	61		1	
7/29/2013	50	63		1	
7/30/2013	48	61		2	3.5
7/31/2013	85	98		1	5.5

Total 53

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