

# KANSAS CORPORATION COMMISSION

## ONE POINT STABILIZED OPEN FLOW OR DELIVERABILITY TEST

Type Test:

- Open Flow **RSL**  
 Deliverability

(See Instructions on Reverse Side)

Test Date:  
10/19/14

API No. 15  
023-20110 - 0000

Company Rosewood Resources, Inc.		Lease Rueb		Well Number 1-9	
County Cheyenne	Location	Section 9	TWP 3S	RNG (E/W) 42W	Acres Attributed 80
Field St. Francis		Reservoir Niobrara		Gas Gathering Connection Branch Systems Inc.	
Completion Date 7-24-1999		Plug Back Total Depth 1673'		Packer Set at	
Casing Size 4 1/2"	Weight 10.5#	Internal Diameter 4.052	Set at 1595'	Perforations 1560'	To 1590'
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) 1590'		Pressure Taps Flange		(Meter Run) (Prover) Size 2"	
Pressure Buildup: Shut in 10-18 20 14 at 1:25 (AM) <input checked="" type="checkbox"/> (PM)		Taken 10-19 20 14 at 1:40 (AM) <input checked="" type="checkbox"/> (PM)			
Well on Line: Started 10-19 20 14 at 1:40 (AM) <input checked="" type="checkbox"/> (PM)		Taken 10-20 20 14 at 2:25 (AM) <input checked="" type="checkbox"/> (PM)			

### OBSERVED SURFACE DATA

Duration of Shut-In 24 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>s</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						120	134.4				
Flow						20	34.4			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 (Mcfd)	GOR (Cubic Feet/ Barrel)	Flowing Fluid Gravity G <sub>m</sub>
						20		

### (OPEN FLOW) (DELIVERABILITY) CALCULATIONS

(P<sub>a</sub>)<sup>2</sup> = 0.207

(P<sub>o</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>o</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>o</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 10 day of December, 20 14.

Witness (if any)

Received  
KANSAS CORPORATION COMMISSION

For Company

For Commission

FEB 25 2015

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 Rueb 1-9 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: 12/10/14

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

Signature: *Jennell Martiney*  
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.

W368  
 Rueb 1-9  
 West St. Francis  
 St. Francis  
 Pumping Unit/Elec  
 October-14  
 Chart Meter

DATE	Casing PSI	STATIC	MCF	SPM	CYCLE	HRS DOWN	Water BBLs	REMARKS (Maximum length 110 characters)
10/1/2014	65	78	19	8	0	0	0	pumping unit off hfp not pumping water
10/2/2014	67	80	19	8	0	0	0	
10/3/2014	70	83	16	8	0	0	0	
10/4/2014	40	53	18	8	3	0	0	started pumping unit
10/5/2014	25	38	19	8	6	0	8	
10/6/2014	25	38	22	8	6	0	7	
10/7/2014	70	83	16	8	3	0	5	shut pumping unit off hfp
10/8/2014	43	56	10	8	0	0	0	
10/9/2014	70	83	22	8	0	0	0	pumping unit off hfp not pumping water
10/10/2014	20	33	17	8	3	0	0	started pumping unit
10/11/2014	20	33	17	8	6	0	5	
10/12/2014	20	33	17	8	6	0	5	
10/13/2014	20	33	20	8	6	0	5	
10/14/2014	20	33	20	8	6	0	5	
10/15/2014	20	33	20	8	6	0	5	
10/16/2014	20	33	20	8	6	0	5	
10/17/2014	20	33	20	8	6	0	5	
10/18/2014	21	34	20	8	3	0	5	shut in for state test
10/19/2014	120	133	0	8	0	24	0	opened well
10/20/2014	23	36	21	8	3	0	0	started pumping unit
10/21/2014	23	36	21	8	6	0	5	
10/22/2014	23	36	21	8	6	0	5	
10/23/2014	23	36	21	8	6	0	5	
10/24/2014	23	36	22	8	6	0	8	
10/25/2014	20	33	22	8	6	0	3	
10/26/2014	20	33	22	8	6	0	3	
10/27/2014	20	33	22	8	6	0	5	
10/28/2014	20	33	22	8	6	0	5	
10/29/2014	20	33	22	8	6	0	5	
10/30/2014	20	33	22	8	6	0	5	
10/31/2014	20	33	21	8	6	0	5	

Total

591

114

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**FEB 25 2015**

CONSERVATION DIVISION  
 WICHITA, KS

W368  
 Rueb 1-9  
 West St. Francis  
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 Pumping Unit/Elec  
 November-14  
 Chart Meter

DATE	Casing PSI	STATIC	MCF	SPM	CYCLE	HRS DOWN	Water BBLs	REMARKS (Maximum length 110 characters)
11/1/2014	23	36	22	8	6	0	5	
11/2/2014	23	36	22	8	6	0	3	
11/3/2014	23	36	22	8	6	0	5	
11/4/2014	23	36	22	8	6	3	3	
11/5/2014	23	36	22	8	6	0	5	
11/6/2014	23	36	22	8	6	0	5	
11/7/2014	23	36	22	8	6	0	5	
11/8/2014	23	36	22	8	6	0	5	
11/9/2014	23	36	22	8	6	0	5	
11/10/2014	23	36	22	8	6	0	5	
11/11/2014	23	36	22	8	3	0		5 shut pumping unit off cold weather
11/12/2014	23	36	20	8	0	0	0	
11/13/2014	20	33	18	8	0	0	0	
11/14/2014	20	33	18	8	0	0	0	
11/15/2014	20	33	18	8	0	0	0	
11/16/2014	20	33	17	8	0	0	0	
11/17/2014	20	33	17	8	0	0	0	
11/18/2014	20	33	14	8	0	0		0 plate freeze put meth down line got moving
11/19/2014	20	33	14	8	0	0	0	
11/20/2014	13	26	14	8	3	0		0 started pumpin unit
11/21/2014	20	33	21	8	6	0	12	
11/22/2014	20	33	21	8	6	0	5	
11/23/2014	20	33	21	8	6	0	5	
11/24/2014	20	33	21	8	6	0	5	
11/25/2014	20	33	20	8	6	0	8	
11/26/2014	20	33	20	8	6	0	8	
11/27/2014	20	33	20	8	6	0	5	
11/28/2014	20	33	20	8	6	0	5	
11/29/2014	20	33	20	8	6	0	5	
11/30/2014	20	33	20	8	6	0	5	
12/1/2014								

Total

596

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W368  
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 Pumping Unit/Elec  
 December-14  
 Chart Meter

DATE	Casing PSI	STATIC	MCF	SPM	CYCLE	HRS DOWN	Water BBLs	REMARKS (Maximum length 110 characters)
12/1/2014	20	33	20	8	6		5	
12/2/2014	20	33	20	8	6		5	
12/3/2014	20	33	20	8	6		5	
12/4/2014	20	33	20	8	6		5	
12/5/2014	22	35	21	8	6		5	
12/6/2014	22	35	20	8	6		5	
12/7/2014	22	35	20	8	6		5	
12/8/2014	20	33	20	8	6		5	
12/9/2014	20	33	20	8	6		5	
12/10/2014	20	33	19	8	6		3	
12/11/2014	20	33	19	8	6		5	
12/12/2014	20	33	19	8	6		5	
12/13/2014	20	33	19	8	6		5	
12/14/2014	20	33	19	8	6		5	
12/15/2014	20	33	19	8	3		3	
12/16/2014	20	33	19	8	0		1	
12/17/2014	20	33	18	8	0		0	
12/18/2014	20	33	18	8	0		0	
12/19/2014	20	33	20	8	3			1 replaced belts, restarted
12/20/2014	20	33	20	8	6		5	
12/21/2014	20	33	20	8	6		5	
12/22/2014	20	33	20	8	6		5	
12/23/2014	20	33	20	8	6		5	
12/24/2014	20	33	18	8	6			5 bp, methanol, plate freeze
12/25/2014	20	33	18	8	6		5	
12/26/2014	20	33	19	8	6		5	
12/27/2014	17	30	17	8	3			6 shut pumping unit off cold weather below 0
12/28/2014	17	30	16	8	0		0	
12/29/2014	17	30	16	8	0		0	
12/30/2014	17	30	16	8	0		0	
12/31/2014	17	30	14	8	0		0	

Total

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