

# KANSAS CORPORATION COMMISSION

## ONE POINT STABILIZED OPEN FLOW OR DELIVERABILITY TEST

(See Instructions on Reverse Side)

Type Test:

- Open Flow **OSI**  
 Deliverability

Test Date:  
6/22/14

API No. 15  
023-20611-0000

Company <b>Rosewood Resources, Inc.</b>		Lease <b>Grace</b>		Well Number <b>1-24</b>	
County <b>Cheyenne</b>	Location <b>NW SE/4</b>	Section <b>24</b>	TWP <b>3S</b>	RNG (EW) <b>41W</b>	Acres Attributed <b>80</b>
Field <b>Cherry Creek</b>		Reservoir <b>Niobrara</b>		Gas Gathering Connection <b>Branch Systems Inc.</b>	
Completion Date <b>5/4/2005</b>		Plug Back Total Depth <b>1507'</b>		Packer Set at	
Casing Size <b>4 1/2"</b>	Weight <b>10.5#</b>	Internal Diameter <b>4.052</b>	Set at <b>1507'</b>	Perforations <b>1302'</b>	To <b>1334'</b>
Tubing Size <b>NONE</b>	Weight	Internal Diameter	Set at	Perforations	To
Type Completion (Describe) <b>Single (Conventional)</b>		Type Fluid Production <b>Dry Gas</b>		Pump Unit or Traveling Plunger? <input checked="" type="radio"/> Yes / No <b>Pumping Unit</b>	
Producing Thru (Annulus / Tubing) <b>Annulus</b>		% Carbon Dioxide		% Nitrogen	
Vertical Depth(H) <b>1334'</b>		Pressure Taps <b>Flange</b>		Gas Gravity - G <sub>g</sub> <b>.6</b>	
Pressure Buildup: Shut in <b>6-7</b>		20 <b>14</b> at <b>9:35</b>		<input checked="" type="radio"/> (AM) / <input type="radio"/> (PM) Taken <b>6-21</b>	
Well on Line: Started <b>6-22</b>		20 <b>14</b> at <b>9:50</b>		<input checked="" type="radio"/> (AM) / <input type="radio"/> (PM) Taken <b>6-23</b>	

### 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						132	146.4				
Flow						54	68.4			360	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>
						34		

### (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: $\frac{P_c^2 - P_a^2}{P_c^2 - P_w^2}$	Backpressure Curve Slope = "n" ----- or ----- Assigned Standard Slope	n x LOG	Antilog	Open Flow Deliverability Equals R x Antilog (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 12 day of December, 20 14.

Received  
KANSAS CORPORATION COMMISSION

*Jennell Martinez*  
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 Grace 1-24 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

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

Signature: *David 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.

W348  
 Grace 1-24  
 St. Francis  
 St. Francis  
 None  
 June-18<sup>th</sup>  
 FloBoss

DATE	Casing PSI	STATIC	MCF	HRS DOWN	REMARKS (Maximum length 110 characters)
6/1/2013	56	69		35	0
6/2/2013	60	73		33	0
6/3/2013	76	89		33	0 turn on pumping unit
6/4/2013	67	80		31	0
6/5/2013	51	64		36	0
6/6/2013	52	65		34	0 turn off pumping unit
6/7/2013	115	128		19	9
6/8/2013	118	131		0	24
6/9/2013	121	134		0	24
6/10/2013	123	136		0	24
6/11/2013	124	137		0	24
6/12/2013	125	138		0	24
6/13/2013	126	139		0	24
6/14/2013	127	140		0	24
6/15/2013	128	141		0	24
6/16/2013	129	142		0	24
6/17/2013	130	143		0	24
6/18/2013	131	144		0	24
6/19/2013	131	144		0	24
6/20/2013	131	144		0	24
6/21/2013	132	145		0	24
6/22/2013	132	145		0	24
6/23/2013	118	131		8	5
6/24/2013	109	122		28	0
6/25/2013	103	116		36	0
6/26/2013	91	104		42	0
6/27/2013	86	99		42	0
6/28/2013	65	78		39	0
6/29/2013	54	67		36	0 started pumping unit
6/30/2013	56	69		36	0
7/1/2013					0

Total

488

Received  
 KANSAS CORPORATION COMMISSION

**FEB 25 2015**

CONSERVATION DIVISION  
 WICHITA, KS

W348

Grace 1-24

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	56	69		36	0	1
7/2/2014	55	68		36	0	2 5 min bt
7/3/2014	56	69		35	0	3
7/4/2014	56	69		35	0	3
7/5/2014	57	70		35	0	2
7/6/2014	57	70		35	0	1
7/7/2014	67	80		34	0	2
7/8/2014	57	70		35	0	3
7/9/2014	59	72		35	0	3
7/10/2014	59	72		35	0	2
7/11/2014	62	75		35	0	1
7/12/2014	62	75		35	0	3
7/13/2014	62	75		34	0	2
7/14/2014	87	100		33	0	1
7/15/2014	53	66		35	0	1
7/16/2014	56	69		35	0	3
7/17/2014	56	69		34	0	2
7/18/2014	57	70		34	0	3
7/19/2014	53	66		34	0	1
7/20/2014	55	67		34	0	2
7/21/2014	109	122		34	0	3
7/22/2014	113	129		0	22	2
7/23/2014	80	93		18	7	1
7/24/2014	50	63		37	3	0
7/25/2014	53	66		29	4	0
7/26/2014	52	65		34	0	0 started pumping unit
7/27/2014	54	67		34	0	3
7/28/2014	54	67		34	0	2
7/29/2014	53	66		34	0	1
7/30/2014	55	68		33	0	3
7/31/2014	55	68		32	0	2

Total

1013

58

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KANSAS CORPORATION COMMISSION

FEB 25 2015

CONSERVATION DIVISION  
WICHITA, KS

W348  
 Grace 1-24  
 St. Francis  
 St. Francis  
 None  
 August-14  
 FloBoss

DATE	Casing				CYCLE	HRS DOWN	Water BBLs	REMARKS (Maximum length 110 characters)
	PSI	STATIC	MCF	SPM				
8/1/2014	55	68	33	6	2	0	3	
8/2/2014	54	67	33	6	2	0	3	
8/3/2014	54	67	33	6	2	0	3	
8/4/2014	54	67	33	6	2	0	3	
8/5/2014	55	68	33	6	2	0	3	
8/6/2014	56	69	33	6	2	0	3	
8/7/2014	56	69	33	6	2	0	3	
8/8/2014	57	70	33	6	2	0	3	
8/9/2014	58	71	33	6	2	0	3	
8/10/2014	59	72	33	6	2	0	3	
8/11/2014	66	79	33	6	2	0	3	5 min BT
8/12/2014	54	67	33	6	2	0	3	
8/13/2014	55	68	33	6	2	0	3	
8/14/2014	54	67	33	6	2	0	3	
8/15/2014	60	73	27	6	2	3	3	
8/16/2014	59	72	35	6	2	0	3	
8/17/2014	60	73	33	6	2	0	3	
8/18/2014	59	72	33	6	2	0	3	
8/19/2014	66	79	29	6	2	2	3	
8/20/2014	57	70	32	6	2	0	3	
8/21/2014	56	69	33	6	2	0	3	
8/22/2014	59	72	33	6	2	0	3	
8/23/2014	53	66	33	6	2	0	3	
8/24/2014	54	67	33	6	2	0	3	
8/25/2014	79	92	32	6	2	0	3	
8/26/2014	56	69	33	6	2	0	3	
8/27/2014	67	80	33	6	2	0	3	
8/28/2014	89	102	33	6	2	0	1.5	
8/29/2014	52	65	25	6	2	5	1.5	
8/30/2014	52	65	34	6	2	0	3	
8/31/2014	67	80	34	6	2	0	3	

Total

1007

90

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