

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

Type Test:

(See Instructions on Reverse Side)

- Open Flow **ASL**  
 Deliverability

Test Date:  
6/22/14

API No. 15  
023-20661-0000

Company Rosewood Resources, Inc.			Lease Ella Mae		Well Number 22-3
County Cheyenne	Location SENW	Section 3S	TWP 3S	RNG (E/W) 42W	Acres Attributed 80
Field Cherry Creek		Reservoir Niobrara		Gas Gathering Connection Branch Systems Inc.	
Completion Date 4/2/2006		Plug Back Total Depth 1765'		Packer Set at	
Casing Size 4 1/2"	Weight 10.5#	Internal Diameter 4.052	Set at 1766.09'	Perforations 1602'	To 1628'
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 <input type="checkbox"/>	
Producing Thru (Annulus / Tubing) Annulus		% Carbon Dioxide		% Nitrogen	Gas Gravity - G <sub>g</sub> .6
Vertical Depth(H) 1402'			Pressure Taps Flange		(Meter Run) (Prover) Size 2"
Pressure Buildup: Shut in 6-7 20 14 at 11:30 (AM) (PM) Taken 6-16 20 14 at 11:40 (AM) (PM)					
Well on Line: Started 6-22 20 14 at 11:40 (AM) (PM) Taken 6-23 20 14 at 1:30 (AM) (PM)					

### 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>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						189	203.4				
Flow						48	62.4			360	

### FLOW STREAM ATTRIBUTES

Plate Coefficient (F <sub>c</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>
						0		

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

(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" 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.

Received  
KANSAS CORPORATION COMMISSION

*Samuel Martiney*  
For Company

FEB 25 2015

Witness (if any)

For Commission

CONSERVATION DIVISION  
WICHITA, KS

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 Ella Mae 22-3 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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FEB 25 2015

CONSERVATION DIVISION  
WICHITA, KS

Signature: *Samuel Mastney*

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.

W433  
 Ella Mae 22-3  
 West St. Francis  
 St. Francis  
 None  
 June-14

DATE	Casing		MCF	HRS		REMARKS (Maximum length 110 characters)
	PSI	STATIC		DOWN		
6/1/2014	51	65		0	0	
6/2/2014	66	80		0	0	
6/3/2014	56	70		0	0	
6/4/2014	44	57		0	0	
6/5/2014	44	57		0	0	
6/6/2014	47	60		0	0	
6/7/2014	165	178		0	9	
6/8/2014	173	186		0	24	
6/9/2014	176	189		0	24	
6/10/2014	176	189		0	24	
6/11/2014	177	190		0	24	
6/12/2014	179	192		0	24	
6/13/2014	180	194		0	24	
6/14/2014	187	200		0	24	
6/15/2014	187	200		0	24	
6/16/2014	189	202		0	24	
6/17/2014	189	202		0	24	
6/18/2014	189	203		0	24	
6/19/2014	189	203		0	24	
6/20/2014	189	202		0	24	
6/21/2014	189	202		0	24	
6/22/2014	189	202		0	24	
6/23/2014	115	128		2	5	
6/24/2014	108	121		2	0	
6/25/2014	95	108		0	0	
6/26/2014	88	101		0	0	
6/27/2014	79	92		0	0	
6/28/2014	48	62		0	0	
6/29/2014	47	61		0	0	
6/30/2014	46	60		0	0	
7/1/2014					0	

Total 4

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W433  
 Ella Mae 22-3  
 West St. Francis  
 St. Francis  
 None  
 July-14

DATE	Casing		MCF	HRS		REMARKS (Maximum length 110 characters)
	PSI	STATIC		DOWN		
7/1/2014	48	62	0	0	0	
7/2/2014	47	61	0	0	0	
7/3/2014	47	61	0	0	0	
7/4/2014	47	61	0	0	0	
7/5/2014	47	61	0	0	0	
7/6/2014	47	61	0	0	0	
7/7/2014	65	78	0	0	0	
7/8/2014	53	66	0	0	0	
7/9/2014	53	66	0	0	0	
7/10/2014	53	66	0	0	0	
7/11/2014	54	67	0	0	0	
7/12/2014	56	69	0	0	0	
7/13/2014	58	71	0	0	0	
7/14/2014	82	95	0	0	0	
7/15/2014	48	61	0	0	0	
7/16/2014	48	61	0	0	0	
7/17/2014	48	61	0	0	0	
7/18/2014	48	61	0	0	0	
7/19/2014	45	58	0	0	0	
7/20/2014	45	58	0	0	0	
7/21/2014	116	129	0	0	0	
7/22/2014	163	177	0	22	0	
7/23/2014	77	90	0	7	0	
7/24/2014	54	68	0	3	0	
7/25/2014	43	57	0	4	0	
7/26/2014	44	58	0	0	0	
7/27/2014	45	59	0	0	0	
7/28/2014	34	48	0	0	0	
7/29/2014	33	47	0	0	0	
7/30/2014	32	46	0	0	0	
7/31/2014	32	46	0	0	0	

Total 0

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 KANSAS CORPORATION COMMISSION

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CONSERVATION DIVISION  
 WICHITA, KS

W433  
 Ella Mae 22-3  
 West St. Francis  
 St. Francis  
 None  
 August-14

DATE	Casing		HRS		REMARKS (Maximum length 110 characters)
	PSI	STATIC	MCF	DOWN	
8/1/2014	32	45	0	0	
8/2/2014	32	45	0	0	
8/3/2014	31	44	0	0	
8/4/2014	47	61	0	0	
8/5/2014	48	61	0	0	
8/6/2014	49	62	0	0	
8/7/2014	50	63	0	0	
8/8/2014	50	63	0	0	
8/9/2014	52	66	0	0	
8/10/2014	48	62	0	0	
8/11/2014	43	56	0	0	
8/12/2014	31	45	0	0	
8/13/2014	31	45	0	0	
8/14/2014	32	46	0	0	
8/15/2014	46	59	0	3	
8/16/2014	29	42	0	0	
8/17/2014	29	42	0	0	
8/18/2014	30	43	0	0	
8/19/2014	45	58	0	2	
8/20/2014	39	53	0	0	
8/21/2014	30	43	0	0	
8/22/2014	58	72	0	0	
8/23/2014	44	58	0	0	
8/24/2014	47	61	0	0	
8/25/2014	64	77	0	0	
8/26/2014	49	63	0	0	
8/27/2014	52	66	0	0	
8/28/2014	52	66	0	0	
8/29/2014	44	57	0	5	
8/30/2014	44	57	0	0	
8/31/2014	59	73	0	0	

Total 0

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