

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

(See Instructions on Reverse Side)

Type Test:

Open Flow **RISF**  
 Deliverability

Test Date:  
9/28/2011

API No. 15  
15-023-20590 -00-00

Company Rosewood Resources		Lease Isernhagen		Well Number 2-22	
County Cheyenne	Location NWSE	Section 22	TWP 3S	RNG (E/W) 41W	Acres Attributed 80
Field St. Francis		Reservoir Niobrara		Gas Gathering Connection Branch Systems Inc.	
Completion Date 9/10/2004		Plug Back Total Depth 1400'		Packer Set at	
Casing Size 4 1/2"	Weight 10.5#	Internal Diameter 4.052	Set at 1411'	Perforations 1261'	To 1297'
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 / <input type="radio"/> No <del>Pumping Unit</del> <b>Flowing</b>	
Producing Thru (Annulus / Tubing) Annulus		% Carbon Dioxide		% Nitrogen	
Vertical Depth(H) 1297'		Pressure Taps Flange		Gas Gravity - G <sub>g</sub> .6 (Meter Run) (Prover) Size 2"	
Pressure Buildup: Shut in 9-27 20 11 at 11:15 (AM) (PM) Taken 9-28 20 11 at 11:25 (AM) (PM)		Well on Line: Started 9-28 20 11 at 11:25 (AM) (PM) Taken 9-29 20 11 at 1:15 (AM) (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>e</sub> )		Tubing Wellhead Pressure (P <sub>w</sub> ) or (P <sub>s</sub> ) or (P <sub>e</sub> )		Duration (Hours)	Liquid Produced (Barrels)
						psig	psia	psig	psia		
Shut-In						150	164.4				
Flow						58	72.4			24	0

### FLOW STREAM ATTRIBUTES

Plate Coefficient (F <sub>s</sub> ) (F <sub>e</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>
						2		

### (OPEN FLOW) (DELIVERABILITY) CALCULATIONS

(P<sub>e</sub>)<sup>2</sup> = \_\_\_\_\_ : (P<sub>w</sub>)<sup>2</sup> = \_\_\_\_\_ : P<sub>d</sub> = \_\_\_\_\_ % (P<sub>e</sub> - 14.4) + 14.4 = \_\_\_\_\_ : (P<sub>e</sub>)<sup>2</sup> = 0.207 : (P<sub>w</sub>)<sup>2</sup> = \_\_\_\_\_

(P <sub>e</sub> ) <sup>2</sup> - (P <sub>w</sub> ) <sup>2</sup> or (P <sub>e</sub> ) <sup>2</sup> - (P <sub>d</sub> ) <sup>2</sup>	(P <sub>e</sub> ) <sup>2</sup> - (P <sub>w</sub> ) <sup>2</sup>	Choose formula 1 or 2: 1. P <sub>e</sub> <sup>2</sup> - P <sub>d</sub> <sup>2</sup> 2. P <sub>e</sub> <sup>2</sup> - P <sub>w</sub> <sup>2</sup> divided by: P <sub>e</sub> <sup>2</sup> - P <sub>w</sub> <sup>2</sup>	LOG of formula 1. or 2. and divide by: $\frac{P_e^2 - P_w^2}{P_e^2 - P_d^2}$	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 28 day of December, 20 11.

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

  
For Company

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

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KCC WICHITA

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 Isernhagen 2-22 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: 12/28/11

Signature:   
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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**KCC WICHITA**

W352

Isernhagen 02-22

St. Francis

St. Francis

None

September-11

DATE	Tubing Casing		STATIC	MCF	SPM	CYCL	HRS DOWN	Water BBL	REMARKS (Maximum length 110 characters)
	PSI	PSI							
9/1/2011		60	72	2	0	0	0	0	
9/2/2011		59	73	2	0	0	0	0	
9/3/2011		59	73	2	0	0	0	0	
9/4/2011		59	73	2	0	0	0	0	
9/5/2011		59	72	2	0	0	0	0	
9/6/2011		59	72	2	0	0	0	0	
9/7/2011		60	72	2	0	0	0	0	
9/8/2011		59	73	2	0	0	0	0	
9/9/2011		60	72	2	0	0	0	0	
9/10/2011		59	72	2	0	0	0	0	
9/11/2011		59	72	2	0	0	0	0	
9/12/2011		60	73	2	0	0	0	0	
9/13/2011		58	72	2	0	0	0	0	
9/14/2011		59	71	2	0	0	0	0	
9/15/2011		58	72	2	0	0	0	0	
9/16/2011		59	72	2	0	0	0	0	
9/17/2011		59	72	2	0	0	0	0	
9/18/2011		58	71	2	0	0	0	0	
9/19/2011		59	71	2	0	0	0	0	
9/20/2011		59	72	2	0	0	0	0	
9/21/2011		59	71	2	0	0	0	0	
9/22/2011		58	71	2	0	0	0	0	
9/23/2011		58	71	2	0	0	0	0	
9/24/2011		58	71	2	0	0	0	0	
9/25/2011		58	72	2	0	0	0	0	
9/26/2011		59	72	2	0	0	0	0	
9/27/2011		55	71	2	0	0	0	0	
9/28/2011		150	70	0	0	0	24	0	si for state test
9/29/2011		54	70	3	0	0	0	0	
9/30/2011		55	68	2	0	0	0	0	
10/1/2011		0	0	0	0	0	0	0	

Total

59

0

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KCC WICHITA

W352

Isernhagen 02-22

St. Francis

St. Francis

None

October-11

DATE	Tubing PSI	Casing PSI	STATIC	MCF	SPM	HRS CYCLE DOWN	Water BBLs	REMARKS (Maximum length 110 characters)
10/1/2011		58	71	2	0	0	0	0
10/2/2011		60	73	2	0	0	0	0
10/3/2011		59	73	2	0	0	0	0
10/4/2011		59	72	2	0	0	0	0
10/5/2011		59	72	2	0	0	0	0
10/6/2011		57	70	2	0	0	0	0
10/7/2011		60	73	2	0	0	0	0
10/8/2011		60	72	2	0	0	0	0
10/9/2011		60	72	2	0	0	0	0
10/10/2011		59	72	2	0	0	0	0
10/11/2011		58	77	2	0	0	0	0
10/12/2011		57	72	2	0	0	0	0
10/13/2011		55	69	2	0	0	0	0
10/14/2011		56	70	2	0	0	0	0
10/15/2011		55	70	2	0	0	0	0
10/16/2011		56	70	2	0	0	0	0
10/17/2011		56	70	2	0	0	0	0
10/18/2011		56	70	2	0	0	0	0
10/19/2011		57	73	2	0	0	0	0
10/20/2011		58	73	2	0	0	0	0
10/21/2011		58	71	2	0	0	0	0
10/22/2011		59	72	2	0	0	0	0
10/23/2011		59	72	2	0	0	0	0
10/24/2011		59	71	2	0	0	0	0
10/25/2011		58	72	2	0	0	0	0
10/26/2011		58	71	2	0	0	0	0
10/27/2011		56	71	2	0	0	0	0
10/28/2011		57	71	2	0	0	0	0
10/29/2011		57	71	2	0	0	0	0
10/30/2011		57	71	2	0	0	0	0
10/31/2011		57	70	2	0	0	0	0

Total

62

0

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W352  
 Isernhagen, 02-22  
 St. Francis  
 St. Francis  
 None  
 November-11

DATE	Tubing Casing		STATIC	MCF	SPM	HRS CYCLE DOWN	Water BBLs	REMARKS (Maximum length 110 characters)
	PSI	PSI						
11/1/2011		58	70	2	0	0	0	0
11/2/2011		57	70	2	0	0	0	0
11/3/2011		55	70	2	0	0	0	0
11/4/2011		57	70	2	0	0	0	0
11/5/2011		57	70	2	0	0	0	0
11/6/2011		57	69	2	0	0	0	0
11/7/2011		66	70	2	0	0	0	0
11/8/2011		57	73	2	0	0	0	0
11/9/2011		56	70	2	0	0	0	0
11/10/2011		56	69	2	0	0	0	0
11/11/2011		57	70	2	0	0	0	0
11/12/2011		56	69	2	0	0	0	0
11/13/2011		56	69	2	0	0	0	0
11/14/2011		56	70	2	0	0	0	0
11/15/2011		54	68	2	0	0	0	0
11/16/2011		55	68	2	0	0	0	0
11/17/2011		54	69	2	0	0	0	0
11/18/2011		56	68	2	0	0	0	0
11/19/2011		53	69	2	0	0	0	0
11/20/2011		53	69	2	0	0	0	0
11/21/2011		55	69	2	0	0	0	0
11/22/2011		56	68	2	0	0	0	0
11/23/2011		57	69	2	0	0	0	0
11/24/2011		57	69	2	0	0	0	0
11/25/2011		56	69	2	0	0	0	0
11/26/2011		56	69	2	0	0	0	0
11/27/2011		46	69	2	0	0	0	0
11/28/2011		56	69	2	0	0	0	0
11/29/2011		56	69	2	0	0	0	0
11/30/2011		57	69	2	0	0	0	0
12/1/2011		0	0	0	0	0	0	0

Total

60

0

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