

# KANSAS CORPORATION COMMISSION

## ONE POINT STABILIZED OPEN FLOW OR DELIVERABILITY TEST

Type Test:

Open Flow  **SI**  
 Deliverability

(See Instructions on Reverse Side)

Test Date:  
8/4/2008

API No. 15  
15-023-20566 **0000**

Company Rosewood Resources		Lease Isernhagen		Well Number 1-27	
County Cheyenne	Location SWSW	Section 27	TWP 3S	Range (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 1589'	Packer Set at		
Casing Size 4 1/2"	Weight 10.5#	Internal Diameter 4.052	Set at 1632'	Perforations 1378'	To 1416'
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		
Producing Thru (Annulus / Tubing) Annulus		% Carbon Dioxide	% Nitrogen	Gas Gravity - G <sub>g</sub> .6	
Vertical Depth (H) 1416'		Pressure Taps Flange		(Meter Run) (Prover) Size 2"	
Pressure Buildup: Shut in <u>8-4</u> 20 <u>08</u> at <u>10:05</u> ( <u>AM</u> ) (PM) Taken <u>8-5</u> 20 <u>08</u> at <u>10:50</u> ( <u>AM</u> ) (PM)					
Well on Line: Started <u>8-5</u> 20 <u>08</u> at <u>10:50</u> ( <u>AM</u> ) (PM) Taken <u>8-6</u> 20 <u>08</u> at <u>11:05</u> ( <u>AM</u> ) (PM)					

### OBSERVED SURFACE DATA

Duration of Shut-in 24 Hours

Static / Dynamic Property	Orifice Size (inches)	Circle one: Meter or 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						<u>50</u>	<u>64.4</u>				
Flow						<u>120</u>	<u>134.4</u>			<u>24</u>	<u>0</u>

### FLOW STREAM ATTRIBUTES

Plate Coefficient (F <sub>v</sub> ) (F <sub>a</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>
						<u>9</u>		

### (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>d</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: $\frac{P_c^2 - P_a^2}{P_c^2 - P_w^2}$	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 11 day of December, 20 08

Witness (if any)

For Commission

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KANSAS CORPORATION COMMISSION  
**JAN 29 2009**  
CONSERVATION DIVISION  
WICHITA, KS

Wayne Zeman  
For Company

Checked by

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SEP 18 2009

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 1-27 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: 12/11/08

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JAN 29 2009

Signature: Wayne Graham

CONSERVATION DIVISION  
WICHITA, KS

Title: Production Foreman

**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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W351  
 Isernhagen 01-27  
 St. Francis  
 St. Francis  
 None  
 August-08

DATE	Casing		MCF	HRS	REMARKS (Maximum length 110 characters)
	PSI	STATIC		DOWN	
8/1/2008		69		10	0
8/2/2008		77		9	0
8/3/2008		75		10	0
8/4/2008		72		10	0
8/5/2008	50	70		9	0 shut in for test
8/6/2008		70		1	0 open
8/7/2008		70		17	0
8/8/2008		71		10	0
8/9/2008		71		10	0
8/10/2008		71		10	0
8/11/2008		71		10	0
8/12/2008		71		10	0
8/13/2008		69		10	0
8/14/2008		69		10	0
8/15/2008		69		10	0
8/16/2008		68		10	0
8/17/2008		69		10	0
8/18/2008		71		10	0
8/19/2008		71		10	0
8/20/2008		72		9	0
8/21/2008		78		9	0
8/22/2008		83		9	0
8/23/2008		86		9	0
8/24/2008		80		10	0
8/25/2008		82		9	0
8/26/2008		82		9	0
8/27/2008		84		9	0
8/28/2008		94		9	0
8/29/2008		82		9	0
8/30/2008		72		10	0
8/31/2008		68		10	0

Total 297

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W351  
 Isernhagen 01-27  
 St. Francis  
 St. Francis  
 None  
 September-08

DATE	Casing PSI	STATIC	MCF	HRS DOWN	REMARKS (Maximum length 110 characters)
9/1/2008		67		10	0
9/2/2008		65		10	0
9/3/2008		64		9	0
9/4/2008		67		9	0
9/5/2008		65		9	0
9/6/2008		182		9	14.5
9/7/2008		100		12	0
9/8/2008		66		10	0
9/9/2008		65		9	0
9/10/2008		67		9	0
9/11/2008		76		9	0
9/12/2008		90		9	0
9/13/2008		112		9	0
9/14/2008		64		10	0
9/15/2008		65		10	0
9/16/2008		65		9	0
9/17/2008		66		9	0
9/18/2008		63		9	0
9/19/2008		63		9	0
9/20/2008		62		9	0
9/21/2008		61		9	0
9/22/2008		61		9	0
9/23/2008		61		9	0
9/24/2008		63		9	0
9/25/2008		63		9	0
9/26/2008		65		9	0
9/27/2008		64		9	0
9/28/2008		65		9	0
9/29/2008		65		9	0
9/30/2008		65		9	0
10/1/2008					0

Total

278

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W351  
 Isernhagen 01-27  
 St. Francis  
 St. Francis  
 None  
 October-08

DATE	Casing PSI	STATIC	MCF	HRS DOWN	REMARKS (Maximum length 110 characters)
10/1/2008		65		9	0
10/2/2008		65		9	0
10/3/2008		66		9	0
10/4/2008		65		9	0
10/5/2008		66		9	0
10/6/2008		65		9	0
10/7/2008		65		9	0
10/8/2008		160		6	14
10/9/2008	120	133		11	0
10/10/2008		67		11	0
10/11/2008		65		9	0
10/12/2008		63		9	0
10/13/2008		64		9	0
10/14/2008		65		9	0
10/15/2008		66		9	0
10/16/2008	55	66		9	0
10/17/2008		65		9	0
10/18/2008		65		9	0
10/19/2008		65		9	0
10/20/2008		64		9	0
10/21/2008		65		9	0
10/22/2008		65		9	0
10/23/2008	50	64		9	0
10/24/2008		65		9	0
10/25/2008		65		9	0
10/26/2008		65		9	0
10/27/2008		68		9	0
10/28/2008		65		9	0
10/29/2008		66		9	0
10/30/2008	55	67		9	0
10/31/2008		66		9	0

Total 280

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