

# KANSAS CORPORATION COMMISSION

## ONE POINT STABILIZED OPEN FLOW OR DELIVERABILITY TEST

(See Instructions on Reverse Side)

Type Test:

- Open Flow **SI**  
 Deliverability

Test Date:  
3/17/2009

API No. 15  
15-023-20587 **0600**

Company Rosewood Resources		Lease Isernhagen		Well Number 2-23	
County Cheyenne	Location NWSE	Section 23	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 1508'		Packer Set at	
Casing Size 4 1/2"	Weight 10.5#	Internal Diameter 4.052	Set at 1514'	Perforations 1316'	To 1352'
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? <b>Yes</b> / No Pumping Unit	
Producing Thru (Annulus / Tubing) Annulus		% Carbon Dioxide		% Nitrogen	
Vertical Depth(H) 1352'		Pressure Taps Flange		Gas Gravity - G <sub>g</sub> .6	
Pressure Buildup: Shut in <u>3-17</u> 20 <u>09</u> at <u>8:25</u> <b>(AM)</b> (PM) Taken <u>3-18</u> 20 <u>09</u> at <u>8:40</u> <b>(AM)</b> (PM)		Well on Line: Started <u>3-18</u> 20 <u>09</u> at <u>8:40</u> <b>(AM)</b> (PM) Taken <u>3-19</u> 20 <u>09</u> at <u>9:25</u> <b>(AM)</b> (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>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						256	270.4				
Flow						115	129.4			24	0

### FLOW STREAM ATTRIBUTES

Plate Coefficient (F <sub>b</sub> ) (F <sub>v</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>
						67		

### (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>	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							

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 31 day of December, 20 09.

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

*Wayne G. Maton*  
\_\_\_\_\_  
For Company

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

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**JAN 07 2010**

**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.

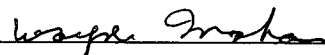
I hereby request a one-year exemption from open flow testing for the Isernhagen 2-23 gas well on the grounds that said well:

(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: 12/31/09

Signature: 

Title: Assistant 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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W353  
 Isernhagen 02-23  
 St. Francis  
 St. Francis  
 None  
 March-09

DATE	Tubing Casing		STATIC MCF	SPM	CYCLE	HRS DOWN	Water BBLs	REMARKS (Maximum length 110 characters)
	PSI	PSI						
3/1/2009			62	31	0	0	0	
3/2/2009			62	32	0	0	0	
3/3/2009			62	33	0	0	0	
3/4/2009			62	33	0	0	0	0 bp
3/5/2009			61	32	0	0	0	
3/6/2009			60	32	0	0	0	
3/7/2009			59	32	0	0	0	
3/8/2009			60	32	0	0	0	
3/9/2009			58	32	0	0	0	
3/10/2009			57	33	0	0	0	
3/11/2009			57	37	0	0	0	
3/12/2009			57	35	0	0	0	
3/13/2009			60	33	0	0	0	
3/14/2009			62	31	0	0	0	
3/15/2009			62	31	0	0	0	
3/16/2009			94	31	0	0	0	
3/17/2009		256	222	0	0	0	24	
3/18/2009			222	0	0	0	24	
3/19/2009		115	83	39	0	0	4.5	
3/20/2009			69	42	0	0	0	0 restart P U
3/21/2009			69	42	0	0	0	
3/22/2009			69	50	0	0	0	
3/23/2009			69	50	0	0	0	
3/24/2009			68	51	0	0	0	
3/25/2009			68	56	0	0	0	
3/26/2009			70	60	0	0	0	
3/27/2009			70	61	0	0	0	
3/28/2009			65	61	0	0	0	
3/29/2009			65	61	0	0	0	
3/30/2009			63	62	0	0	0	
3/31/2009			62	63	0	0	0	

Total 1218

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W353

Isernhagen 02-23

St. Francis

St. Francis

None

April-09

DATE	Tubing PSI	Casing PSI	STATIC	MCF	SPM	HRS CYCLE DOWN	Water BBLs	REMARKS (Maximum length 110 characters)
4/1/2009			66	63	0	0	0	
4/2/2009			65	64	0	0	0	
4/3/2009			68	50	0	0	0	
4/4/2009			65	65	0	0	0	
4/5/2009			66	66	0	0	0	
4/6/2009			65	66	0	0	0	
4/7/2009			66	59	0	0	0	
4/8/2009			67	54	6.5	24	0	43 started pumping unit
4/9/2009			68	56	6.5	24	0	43 bucket test 4 min
4/10/2009			70	61	6.5	24	0	41
4/11/2009			71	63	6.5	24	0	42
4/12/2009			71	65	6.5	24	0	43
4/13/2009			77	66	6.5	24	0	43
4/14/2009			85	66	6.5	24	0	42
4/15/2009			65	67	6.5	18	0	32 bucket test 4 min
4/16/2009			65	67	6.5	18	0	33
4/17/2009			71	67	6.5	18	0	32
4/18/2009			68	68	6.5	18	0	31
4/19/2009			74	68	6.5	18	0	32
4/20/2009			74	69	6.5	18	0	33
4/21/2009			87	71	6.5	18	0	32 bucket test 4 min
4/22/2009			65	75	6.5	18	0	33
4/23/2009			80	75	6.5	18	0	32
4/24/2009			66	74	6.5	18	0	31
4/25/2009			64	75	6.5	18	0	32
4/26/2009			64	74	6.5	18	0	33
4/27/2009			66	73	6.5	18	0	32 bucket test 4 min
4/28/2009			64	74	6.5	18	0	31
4/29/2009			64	74	6.5	18	0	34
4/30/2009			74	73	6.5	18	0	33
5/1/2009							0	

Total

2008

813

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W353

Isernhagen 02-23

St. Francis

St. Francis

None

May-09

DATE	Tubing PSI	Casing PSI	STATIC	MCF	SPM	HRS CYCLE DOWN	Water BBLs	REMARKS (Maximum length 110 characters)
5/1/2009			65	73	0	0	0	
5/2/2009			63	73	0	0	0	
5/3/2009			63	73	0	0	0	
5/4/2009			76	73	0	0	0	
5/5/2009			64	73	0	0	0	0 bp
5/6/2009			63	73	6.5	18	0	32 bucket test 4 min
5/7/2009			63	73	6.5	18	0	33
5/8/2009			65	73	6.5	18	0	34
5/9/2009			65	71	6.5	18	0	33
5/10/2009			63	73	6.5	18	0	32
5/11/2009			61	74	6.5	18	0	33
5/12/2009			67	73	6.5	18	0	32
5/13/2009			73	73	6.5	18	0	31 bp
5/14/2009			74	73	6.5	18	0	32 bucket test 4 min
5/15/2009			74	73	6.5	18	0	31
5/16/2009			74	73	6.5	18	0	32
5/17/2009			74	73	6.5	18	0	31
5/18/2009			75	73	6.5	18	0	32
5/19/2009			97	73	6.5	18	0	33
5/20/2009			107	35	0	0	12	16 shut pump off hfp
5/21/2009			73	91	6.5	18	0	0 started pumping unit
5/22/2009			75	80	6.5	18	0	33
5/23/2009			74	80	6.5	18	0	32
5/24/2009			73	82	6.5	18	0	31
5/25/2009			73	82	6.5	18	0	32
5/26/2009			74	81	6.5	18	0	33
5/27/2009			72	81	6.5	18	0	32
5/28/2009			72	81	6.5	18	0	33 bp
5/29/2009			72	80	6.5	18	0	32
5/30/2009			72	81	6.5	18	0	33
5/31/2009			71	81	6.5	18	0	31

Total

2321

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