

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

Type Test:

- Open Flow **SI**  
 Deliverability

Test Date:  
7/17/2009

API No. 15  
15-023-20662 **000**

Company Rosewood Resources		Lease Isernhagen		Well Number 22-25	
County Cheyenne	Location SENW/4	Section 25	TWP 3S	RNG (E/W) 41W	Acres Attributed 80
Field St. Francis		Reservoir Niobrara		Gas Gathering Connection Branch Systems Inc.	
Completion Date 3/10/2006		Plug Back Total Depth 1463'		Packer Set at	
Casing Size 4 1/2"	Weight 10.5#	Internal Diameter 4.052	Set at 1464'	Perforations 1280'	To 1316'
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	Gas Gravity - G <sub>g</sub> .6
Vertical Depth(H) 1316'		Pressure Taps Flange		(Meter Run) (Prover) Size 2"	
Pressure Buildup:	Shut in 7-16	20 09	at 9:25	<b>AM</b> (PM) Taken 7-17	20 09 at 9:40 <b>AM</b> (PM)
Well on Line:	Started 7-17	20 09	at 9:40	<b>AM</b> (PM) Taken 7-18	20 09 at 10:25 <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>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						65	79.4				
Flow						196	210.4			24	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>t</sub>	Deviation Factor F <sub>pv</sub>	Metered Flow R (Mcf/d)	GOR (Cubic Feet/ Barrel)	Flowing Fluid Gravity G <sub>m</sub>
						47		

### (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>o</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: $\frac{P_c^2 - P_w^2}{P_c^2 - P_a^2}$	Backpressure Curve Slope = "n" ----- or ----- Assigned Standard Slope	n x LOG [ ]	Antilog	Open Flow Deliverability Equals R x Antilog (Mcf/d)

Open Flow

Mcf/d @ 14.65 psia

Deliverability

Mcf/d @ 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 18 day of November, 20 09.

\_\_\_\_\_  
Witness (if any)

*Tom W. Reelf*  
For Company

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\_\_\_\_\_  
For Commission

Checked by

**NOV 30 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.

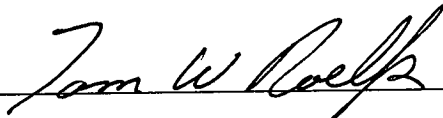
I hereby request a one-year exemption from open flow testing for the Isernhagen 22-25 gas well on the grounds that said well:

(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: 11/18/09

Signature:   
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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W369  
 Isernhagen 22-25  
 St. Francis  
 St. Francis  
 None  
 July-09

DATE	Casing			HRS	Water	REMARKS (Maximum length 110 characters)	
	PSI	STATIC MCF	SPM	CYCLDOWN	BBLs		
7/1/2009		73	44	6	12	0	19
7/2/2009		73	44	6	12	0	18
7/3/2009		74	44	6	12	0	17
7/4/2009		73	44	6	12	0	18
7/5/2009		74	44	6	12	0	19
7/6/2009		74	45	6	12	0	18
7/7/2009		76	44	0	0	0	17
7/8/2009		170	40	0	0	6	0
7/9/2009		92	35	0	0	3	0
7/10/2009		74	40	0	0	0	0
7/11/2009		73	44	0	0	0	0
7/12/2009		64	32	6	12	0	9 restart p u
7/13/2009		73	44	6	12	0	16
7/14/2009		65	37	6	12	0	19
7/15/2009		73	40	6	12	0	18
7/16/2009	65	77	40	0	0	0	17 shut well in for test
7/17/2009		73	40	0	0	0	17
7/18/2009	196	63	0	6	12	0	0 open
7/19/2009		78	49	6	12	0	19
7/20/2009		73	49	6	12	7	18
7/21/2009		75	51	6	12	0	17
7/22/2009		72	50	6	12	0	18
7/23/2009		71	49	6	12	0	19 bucket test 4.5
7/24/2009		72	50	6	12	0	18
7/25/2009		76	48	6	12	0	16
7/26/2009		71	45	6	12	0	17
7/27/2009		71	40	6	12	4	16
7/28/2009		71	47	6	12	0	17
7/29/2009		71	47	6	12	0	18
7/30/2009		79	47	6	12	0	17
7/31/2009		78	47	6	12	0	19 bucket test 4.5

Total

1320

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W369  
 Isernhagen 22-25  
 St. Francis  
 St. Francis  
 None  
 August-09

DATE	Casing PSI	STATIC	MCF	SPM	HRS CYCLE	DOWN	Water BBLs	REMARKS (Maximum length 110 characters)
8/1/2009		75	47	0	0	0	0	
8/2/2009		75	47	0	0	0	0	
8/3/2009		73	47	0	0	0	0	
8/4/2009		81	47	0	0	0	0	
8/5/2009		97	34	0	0	0	0	
8/6/2009		72	47	0	0	0	0	
8/7/2009		75	47	0	0	0	0	
8/8/2009		73	47	0	0	0	0	
8/9/2009		73	47	0	0	0	0	
8/10/2009		72	47	0	0	0	0	0 PU OFF
8/11/2009		67	44	0	0	0	0	
8/12/2009		64	39	0	0	0	0	
8/13/2009		64	37	0	0	0	0	
8/14/2009		69	38	0	0	0	0	
8/15/2009		73	42	0	0	0	0	
8/16/2009		70	44	0	0	0	0	0 pu off
8/17/2009		140	42	0	0	0	0	
8/18/2009		138	37	0	0	0	0	
8/19/2009		139	35	0	0	0	0	
8/20/2009		67	35	6	12	0	0	0 started pump
8/21/2009		67	44	6	12	0	20	
8/22/2009		67	42	6	12	4	19	
8/23/2009		122	42	6	12	0	19	
8/24/2009		71	44	6	12	0	18	
8/25/2009		104	43	6	12	4	17	
8/26/2009		71	45	6	12	0	18	
8/27/2009		72	45	6	12	0	19	
8/28/2009		72	45	6	12	0	20	
8/29/2009		137	46	6	12	0	19	
8/30/2009		73	46	6	12	3	18	
8/31/2009		72	46	6	12	0	19	

Total

1338

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W369

Isernhagen 22-25

St. Francis

St. Francis

None

September-09

DATE	Casing				HRS		Water
	PSI	STATIC	MCF	SPM	CYCLE	DOWN	BBLs
9/1/2009	0	72	46	6	12	0	19
9/2/2009	0	72	46	6	12	0	18
9/3/2009	0	75	46	6	12	0	17
9/4/2009	0	104	45	6	12	6	16
9/5/2009	0	76	46	6	12	0	17
9/6/2009	0	73	45	6	12	0	17
9/7/2009	0	73	46	6	12	0	16
9/8/2009	0	74	46	0	0	0	17
9/9/2009	0	75	42	0	0	0	0
9/10/2009	0	70	38	0	0	0	0
9/11/2009	0	68	36	0	0	0	0
9/12/2009	0	66	34	0	0	0	0
9/13/2009	0	73	33	0	0	1.5	0
9/14/2009	0	65	32	0	0	0	0
9/15/2009	0	67	32	0	0	0	0
9/16/2009	0	64	31	0	0	0	0
9/17/2009	0	63	31	0	0	0	0
9/18/2009	0	63	30	0	0	0	0
9/19/2009	0	62	30	0	0	0	0
9/20/2009	0	62	29	0	0	0	0
9/21/2009	0	63	29	0	0	0	0
9/22/2009	0	62	29	0	0	0	0
9/23/2009	0	62	28	0	0	0	0
9/24/2009	0	61	28	0	0	0	0
9/25/2009	0	89	26	0	0	6	0
9/26/2009	0	117	35	0	0	0	0
9/27/2009	0	98	29	0	0	0	0
9/28/2009	0	90	28	0	0	0	0
9/29/2009	0	68	27	0	0	0	0
9/30/2009	0	84	21	0	0	8	0
10/1/2009	0	0	0	0	0	0	0

Total

1044

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