

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

Type Test:

Open Flow  **SI**  
 Deliverability

(See Instructions on Reverse Side)

Test Date:  
5/13/2008

API No. 15  
023-20554-0000

Company Rosewood Resources, Inc.		Lease Northrup		Well Number 2-33	
County Cheyenne	Location SWSE	Section 33	TWP 2S	RNG (E/W) 42W	Acres Attributed 80
Field Cherry Creek		Reservoir Niobrara	Gas Gathering Connection Branch Systems Inc.		
Completion Date 7-15-2004		Plug Back Total Depth 1815'	Packer Set at		
Casing Size 4 1/2"	Weight 10.5#	Internal Diameter 4.052	Set at 1820'	Perforations 1600'	To 1634'
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="radio"/> No		
Producing Thru (Annulus / Tubing) Annulus		% Carbon Dioxide	% Nitrogen	Gas Gravity - G <sub>g</sub> .6	
Vertical Depth(H) 1634'	Pressure Taps Flange		(Meter Run) (Prover) Size 2"		
Pressure Buildup: Shut in 5-13 20 08 at 1:10 (AM) <input checked="" type="radio"/> (PM) Taken 5-14 20 08 at 2:00 (AM) <input checked="" type="radio"/> (PM)					
Well on Line: Started 5-14 20 08 at 2:00 (AM) <input checked="" type="radio"/> (PM) Taken 5-15 20 08 at 1:30 (AM) <input checked="" type="radio"/> (PM)					

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### OBSERVED SURFACE DATA

Duration of Shut-in 24 Hours

Static / Dynamic Property	Orifice Size (inches)	Circle one: Meter or Prover Pressure psig (P <sub>m</sub> )	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						55	69.4				
Flow						200	214.4			24	0

### FLOW STREAM ATTRIBUTES

Plate Coefficient (F <sub>p</sub> ) (F <sub>s</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>
						18		

### (OPEN FLOW) (DELIVERABILITY) CALCULATIONS

(P<sub>a</sub>)<sup>2</sup> = 0.207  
(P<sub>o</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>	(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 (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 10 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 Inman*  
For Company

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 Northrup 2-33 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: 12/10/08

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Signature: Wayne Mason

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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W363  
 Northrup 2-33  
 West St. Francis  
 St. Francis  
 Pumping Unit/Elec  
 May-08

DATE	Tubing PSI	Casing PSI	STATIC	MCF	SPM	HRS CYCLE DOWN	Water BBLs	REMARKS (Maximum length 110 characters)
5/1/2008			75	24	5.5	6.5	0	5
5/2/2008			74	24	5.5	6.5	0	6
5/3/2008			74	24	5.5	6.5	0	5
5/4/2008			75	24	5.5	6.5	0	6
5/5/2008			75	24	5.5	6.5	0	6
5/6/2008			74	24	5.5	6.5	0	5
5/7/2008			76	24	5.5	6.5	0	6
5/8/2008			76	24	5.5	6.5	0	6 bucket test 8 min
5/9/2008			76	24	5.5	6.5	0	5
5/10/2008			76	24	5.5	6.5	0	6
5/11/2008			76	25	5.5	6.5	0	7
5/12/2008			75	24	5.5	6.5	0	6
5/13/2008			73	24	5.5	6.5	0	6 bucket test 8 min greased
5/14/2008		55	71	24	0	0	0	7 shut in for test
5/15/2008		200	76	1	5.5	6.5	0	0 open
5/16/2008			81	37	5.5	6.5	0	6
5/17/2008			76	24	5.5	6.5	0	6
5/18/2008			79	25	5.5	6.5	0	8
5/19/2008			79	24	5.5	6.5	0	5
5/20/2008			79	23	5.5	6.5	0	6
5/21/2008			78	22	5.5	6.5	0	5
5/22/2008			78	22	5.5	6.5	0	6 bucket test 8 min
5/23/2008			79	21	5.5	6.5	0	5
5/24/2008			78	21	5.5	6.5	0	6
5/25/2008			77	20	5.5	6.5	0	5
5/26/2008			77	20	5.5	6.5	0	4
5/27/2008			77	20	5.5	6.5	0	5
5/28/2008			78	20	5.5	6.5	0	6
5/29/2008			78	19	5.5	6.5	0	6 bucket test 8 min
5/30/2008			79	19	5.5	6.5	0	5
5/31/2008			78	20	5.5	6.5	0	7

Total

695

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W363  
 Northrup 2-33  
 West St. Francis  
 St. Francis  
 Pumping Unit/Elec  
 June-08

DATE	Tubing Casing		STATIC MCF	SPM	HRS CYCLE DOWN	Water BBLs	REMARKS (Maximum length 110 characters)		
	PSI	PSI							
6/1/2008			78	19	5.5	6.5	0	6	
6/2/2008			78	19	5.5	6.5	0	5	
6/3/2008			78	18	5.5	6.5	0	5	
6/4/2008			77	18	5.5	6.5	0	6	bucket test 8 min
6/5/2008			77	18	5.5	6.5	0	7	
6/6/2008			76	18	5.5	6.5	0	6	
6/7/2008			80	18	5.5	6.5	0	5	
6/8/2008			78	18	5.5	6.5	0	6	
6/9/2008			76	18	5.5	6.5	0	7	
6/10/2008			77	18	5.5	6.5	0	8	
6/11/2008			80	17	5.5	6.5	0	7	
6/12/2008			79	17	5.5	6.5	0	6	bucket test 8 min
6/13/2008			79	17	5.5	6.5	0	7	
6/14/2008			80	17	5.5	6.5	0	5	
6/15/2008			80	17	5.5	6.5	0	6	
6/16/2008			79	17	5.5	6.5	0	5	
6/17/2008			77	17	5.5	6.5	0	7	
6/18/2008			78	17	5.5	6.5	0	6	
6/19/2008			76	17	5.5	6.5	0	6	bucket test 8 min
6/20/2008			77	17	5.5	6.5	0	5	
6/21/2008			77	17	5.5	6.5	0	6	
6/22/2008			76	17	5.5	6.5	0	7	
6/23/2008			78	17	5.5	6.5	0	6	
6/24/2008			77	17	5.5	6.5	0	7	
6/25/2008			77	17	5.5	6.5	0	6	
6/26/2008			77	17	5.5	6.5	0	8	
6/27/2008			76	16	5.5	6.5	0	8	
6/28/2008			76	16	5.5	6.5	0	7	
6/29/2008			76	16	5.5	6.5	0	7	
6/30/2008			76	16	5.5	6.5	0	6	
7/1/2008							0		

Total

518

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W363  
 Northrup 2-33  
 West St. Francis  
 St. Francis  
 Pumping Unit/Elec  
 July-08

DATE	Tubing Casing		STATIC MCF	SPM	CYCLE	HRS DOWN	Water BBLs	REMARKS (Maximum length 110 characters)
	PSI	PSI						
7/1/2008			76	16	5.5	6.5	0	4
7/2/2008			80	16	5.5	6.5	0	5
7/3/2008			78	16	5.5	6.5	0	6
7/4/2008			78	16	5.5	6.5	0	5
7/5/2008			83	16	5.5	6.5	0	4
7/6/2008			86	16	5.5	6.5	0	5
7/7/2008			84	16	5.5	6.5	0	6
7/8/2008			82	16	5.5	6.5	0	5
7/9/2008			79	16	5.5	6.5	0	6 bucket test 8 min
7/10/2008			83	16	5.5	6.5	0	5
7/11/2008			91	16	5.5	6.5	0	6
7/12/2008			84	16	5.5	6.5	0	4
7/13/2008			80	16	5.5	6.5	0	5
7/14/2008			112	16	5.5	6.5	11	4 PU off HFP
7/15/2008			121	14	0	0	0	0
7/16/2008			102	14	0	0	0	0 pu off hfp greased
7/17/2008			85	14	0	0	0	0 pu off hfp
7/18/2008			117	14	0	0	0	0 pu off hfp
7/19/2008			68	14	5.5	6.5	3	0 started pumping unit
7/20/2008			75	14	5.5	6.5	0	6
7/21/2008			78	14	5.5	6.5	0	5
7/22/2008		65	82	15	5.5	6.5	0	8 bucket test 6 min
7/23/2008			83	15	5.5	6.5	0	7
7/24/2008			88	15	0	0	4	6 pump off hfp
7/25/2008			87	14	0	0	0	0
7/26/2008			78	14	0	0	0	0
7/27/2008			64	13	5.5	6.5	0	6 restart pump
7/28/2008			71	14	5.5	6.5	0	7
7/29/2008			81	14	5.5	6.5	0	6
7/30/2008			169	14	0	0	0	5 pump off hfp
7/31/2008			83	13	5.5	6.5	5	0 restart pump

Total

463

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