

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

Type Test:

- Open Flow  **SI**  
 Deliverability

(See Instructions on Reverse Side)

Test Date:  
5/12/2008

API No. 15  
023-20666-00 **00**

Company Rosewood Resources, Inc.		Lease Heim		Well Number 31-33	
County Cheyenne	Location NWNE	Section 33	TWP 2S	RNG (E/W) 42W	Acres Attributed 80
Field Cherry Creek		Reservoir Niobrara		Gas Gathering Connection Branch Systems Inc.	
Completion Date 3/29/2006		Plug Back Total Depth 1799'		Packer Set at	
Casing Size 4 1/2"	Weight 10.5#	Internal Diameter 4.052	Set at 1799.86'	Perforations 1616'	To 1648'
Tubing Size <b>NONE</b>	Weight	Internal Diameter	Set at	Perforations	To
Type Completion (Describe) <b>Single (Conventional)</b>		Type Fluid Production <b>Dry Gas</b>		Pump Unit or Traveling Plunger? Yes / <input checked="" type="checkbox"/> <b>No</b>	
Producing Thru (Annulus / Tubing) <b>Annulus</b>		% Carbon Dioxide		% Nitrogen	
Vertical Depth(H) 1614'		Pressure Taps <b>Flange</b>		Gas Gravity - G <sub>g</sub> .6	
Pressure Buildup: Shut in <b>5-12</b> 20 <b>08</b> at <b>3:30</b> (AM) <input checked="" type="checkbox"/> <b>PM</b> Taken <b>5-13</b> 20 <b>08</b> at <b>4:00</b> (AM) <input checked="" type="checkbox"/> <b>PM</b>		Well on Line: Started <b>5-13</b> 20 <b>08</b> at <b>4:00</b> (AM) <input checked="" type="checkbox"/> <b>PM</b> Taken <b>5-14</b> 20 <b>08</b> at <b>4:50</b> (AM) <input checked="" type="checkbox"/> <b>PM</b>			

### OBSERVED SURFACE DATA

Duration of Shut-in **24** Hours

Static / Dynamic Property	Orifice Size (inches)	Circle one: Meter 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>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						83	97.4				
Flow						86	100.4				

### 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>tt</sub>	Deviation Factor F <sub>pv</sub>	Metered Flow R (Mcfd)	GOR (Cubic Feet/ Barrel)	Flowing Fluid Gravity G <sub>m</sub>
						80		

### (OPEN FLOW) (DELIVERABILITY) CALCULATIONS

(P<sub>c</sub>)<sup>2</sup> = \_\_\_\_\_ : (P<sub>w</sub>)<sup>2</sup> = \_\_\_\_\_ : P<sub>a</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: P <sub>c</sub> <sup>2</sup> - P <sub>w</sub> <sup>2</sup>	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 10 day of December, 20 08

Witness (if any) \_\_\_\_\_ For Commission \_\_\_\_\_  
 \_\_\_\_\_ For Company \_\_\_\_\_  
 \_\_\_\_\_ Checked by \_\_\_\_\_

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**JAN 29 2009**

CONSERVATION DIVISION  
WICHITA KS

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 Heim 31-33 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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CONSERVATION DIVISION  
WICHITA, KS

Signature: *Wayne Malar*

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.

W436  
 Heim 31-33  
 West St. Francis  
 St. Francis  
 None  
 May-08

DATE	Tubing Casing		STATIC MCF	SPM	HRS CYCLE DOWN	Water BBLs	REMARKS (Maximum length 110 characters)
	PSI	PSI					
5/1/2008			81	75	7	12	0 21
5/2/2008			81	75	7	12	0 20
5/3/2008			80	75	7	12	0 21
5/4/2008			80	75	7	12	0 20
5/5/2008			80	75	7	12	0 20
5/6/2008			80	75	7	12	0 21
5/7/2008			82	75	7	12	0 21 bucket test 4 min
5/8/2008			82	75	7	12	0 20
5/9/2008			82	75	7	12	0 22
5/10/2008			82	75	7	12	0 21
5/11/2008			82	75	7	12	0 20
5/12/2008			83	75	7	12	0 19
5/13/2008		70	86	75	0	0	0 21 shut in for test
5/14/2008		190	68	10	7	12	0 0 open
5/15/2008			99	108	7	12	0 21 bucket test 4 min
5/16/2008			85	90	7	12	0 22
5/17/2008			83	86	7	12	0 20
5/18/2008			82	87	7	12	0 21
5/19/2008			83	68	0	0	0 0
5/20/2008			82	65	7	12	0 0 pumping unit turned off restarted
5/21/2008			84	77	7	12	0 22
5/22/2008			85	85	7	12	0 21 bucket test 4 min
5/23/2008			86	86	7	12	0 20
5/24/2008			83	86	7	12	0 19
5/25/2008			83	85	7	12	0 20
5/26/2008			83	85	7	12	0 21
5/27/2008			85	84	7	12	0 22
5/28/2008			84	83	7	12	0 21 bucket test 4 min
5/29/2008			85	83	7	12	0 22
5/30/2008			87	83	7	12	0 20
5/31/2008			85	83	7	12	0 22

Total

2409

581

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W436  
 Heim 31-33  
 West St. Francis  
 St. Francis  
 None  
 June-08

DATE	Tubing Casing		STATIC	MCF	SPM	HRS CYCLE DOWN	Water BBLs	REMARKS (Maximum length 110 characters)
	PSI	PSI						
6/1/2008			85	83	7	12	0	21
6/2/2008			85	82	7	12	0	22
6/3/2008			86	81	7	12	0	21
6/4/2008			83	81	7	12	0	20
6/5/2008			83	81	7	12	0	21 bucket test 4 min
6/6/2008			81	70	7	12	0	0 power off during storm-restarted
6/7/2008			82	72	7	12	0	22
6/8/2008			85	85	7	12	0	23
6/9/2008			83	82	7	12	0	22
6/10/2008			83	82	7	12	0	23
6/11/2008			87	80	7	12	0	22
6/12/2008			86	80	7	12	0	21 bucket test 4 min
6/13/2008			87	80	7	12	0	20
6/14/2008			86	80	7	12	0	22
6/15/2008			88	80	7	12	0	20
6/16/2008			86	79	7	12	0	20
6/17/2008			86	80	7	12	0	19
6/18/2008			84	79	7	12	0	20
6/19/2008			84	79	7	12	0	21 bucket test 4 min
6/20/2008			84	79	7	12	0	20
6/21/2008			83	79	7	12	0	19
6/22/2008			84	79	7	12	0	20
6/23/2008			86	79	7	12	0	19
6/24/2008			85	79	7	12	0	20
6/25/2008			85	79	7	12	0	21 bucket test 4 min
6/26/2008			85	78	7	12	0	20
6/27/2008			85	78	7	12	0	19
6/28/2008			83	78	7	12	0	21
6/29/2008			83	78	7	12	0	22
6/30/2008			83	78	7	12	0	21
7/1/2008							0	

Total

2380

602

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W436  
 Heim 31-33  
 West St. Francis  
 St. Francis  
 None  
 July-08

DATE	Tubing Casing					HRS CYCLE DOWN	Water BBLs	REMARKS (Maximum length 110 characters)
	PSI	PSI	STATIC	MCF	SPM			
7/1/2008			83	78	7	12	0	19
7/2/2008			83	78	7	12	0	20
7/3/2008			83	75	7	12	0	21
7/4/2008			81	66	7	12	0	0 pump off
7/5/2008			90	77	7	12	0	21 pump off
7/6/2008			91	76	7	12	0	10 pump off
7/7/2008			94	79	7	12	0	19
7/8/2008			89	83	7	12	0	20
7/9/2008			85	79	7	12	0	21 bucket test 4 min
7/10/2008			92	79	7	12	0	20
7/11/2008			95	78	7	12	0	22
7/12/2008			87	79	7	12	0	21
7/13/2008			87	78	7	12	0	19
7/14/2008			107	78	7	12	11	16 PU off HFP
7/15/2008			125	51	0	0	0	0 PU off HFP
7/16/2008			107	70	0	0	0	0 pu off hfp greased
7/17/2008			91	63	0	0	0	0 pu off hfp
7/18/2008			117	59	0	0	0	0 pu off hfp
7/19/2008			73	56	7	12	3	0 started pumping unit
7/20/2008			80	63	7	12	0	21
7/21/2008			84	70	7	12	0	22
7/22/2008			88	71	7	12	0	21 bucket test 4 min
7/23/2008			89	71	7	12	0	22
7/24/2008			93	72	0	0	4	20 pump off hfp
7/25/2008			90	62	0	0	0	0 PU off HFP
7/26/2008			84	70	0	0	0	0 PU off HFP
7/27/2008			68	57	7	12	0	20 restart pump
7/28/2008			73	62	7	12	0	21
7/29/2008			86	67	7	12	0	21 bucket test 4 min
7/30/2008			167	69	0	0	0	20 pump off hfp
7/31/2008			85	59	7	12	5	0 restart pump

Total

2175

437

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