

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

Type Test:

Open Flow **AST**

Deliverability

(See Instructions on Reverse Side)

Test Date:  
9/7/2011

API No. 15  
023-20110 - 0000

Company Rosewood Resources, Inc.		Lease Rueb		Well Number 1-9	
County Cheyenne	Location <b>SESE</b>	Section 9	TWP 3S	RNG (E/W) 42W	Acres Attributed 80
Field St. Francis		Reservoir Niobrara		Gas Gathering Connection Branch Systems Inc.	
Completion Date 7-24-1999		Plug Back Total Depth 1673'		Packer Set at	
Casing Size 4 1/2"	Weight 10.5#	Internal Diameter 4.052	Set at 1595'	Perforations 1560'	To 1590'
Tubing Size <b>NONE 2 3/8 "</b>	Weight	Internal Diameter	Set at <b>1595'</b>	Perforations	To
Type Completion (Describe) Single (Conventional)		Type Fluid Production Dry Gas		Pump Unit or Travelling Plunger? <input checked="" type="radio"/> Yes / No	
Producing Thru (Annulus / Tubing) Annulus		% Carbon Dioxide		% Nitrogen	
Vertical Depth(H) 1590'		Pressure Taps Flange		Gas Gravity - G <sub>g</sub> .6 (Meter Run) (Prover) Size 2"	
Pressure Buildup:	Shut in 9-6	20 11	at 1:25	(AM) <input checked="" type="radio"/> (PM) Taken 9-7	20 11
Well on Line:	Started 9-7	20 11	at 1:40	(AM) <input checked="" type="radio"/> (PM) Taken 9-8	20 11

### OBSERVED SURFACE DATA

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>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						154	168.4				
Flow						30	44.4			24	0

### FLOW STREAM ATTRIBUTES

Plate Coefficient (F <sub>p</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>
						25		

### (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>o</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> or (P <sub>1</sub> ) <sup>2</sup> - (P <sub>o</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>w</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 28 day of December, 20 11

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

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

*Samuel Grew*  
\_\_\_\_\_  
For Company

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**APR 24 2012**  
**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 Rueb 1-9 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: 12/28/11

Signature: 

Title: Production Assistant

**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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W368  
 Rueb 1-9  
 West St. Francis  
 St. Francis  
 Pumping Unit/Elec  
 September-11  
 Chart Meter

DATE	Casing PSI	STATIC MCF	SPM	HRS CYCLIDOWN	Water BBLs	REMARKS (Maximum length 110 characters)
9/1/2011	35	48	26	6 8	5	
9/2/2011	29	42	26	6 8	3	
9/3/2011	37	40	25	6 8	12	
9/4/2011	29	42	26	6 8	7	
9/5/2011	29	42	26	6 8	5	
9/6/2011	30	43	26	6 4	8	shut well into do state test
9/7/2011	154	43	0	6 0	24	0 opened well didn't start pumping unit hp
9/8/2011	35	48	28	6 4	0	started pumping unit
9/9/2011	35	48	29	6 8	7	
9/10/2011	32	45	26	6 8	7	
9/11/2011	32	45	26	6 8	10	
9/12/2011	31	44	26	6 8	5	
9/13/2011	30	43	26	6 8	8	
9/14/2011	67	80	25	6 4	2	high fp, no water
9/15/2011	71	84	23	6 0	0	
9/16/2011	66	79	25	6 4	4	started pumping unit
9/17/2011	43	56	25	6 8	0	
9/18/2011	38	51	26	6 8	12	
9/19/2011	35	48	27	6 8	10	
9/20/2011	30	43	27	6 8	2	
9/21/2011	30	43	27	6 8	7	
9/22/2011	35	48	27	6 8	7	
9/23/2011	65	78	29	6 8	7	
9/24/2011	75	88	26	6 4	0	shut pumping unit off hfp and no water
9/25/2011	85	98	25	6 0	0	
9/26/2011	70	83	23	6 0	0	
9/27/2011	70	83	23	6 0	0	
9/28/2011	73	86	23	6 0	0	
9/29/2011	73	86	23	6 0	0	shut pumping unit off hfp and no water
9/30/2011	71	84	21	6 0	0	
10/1/2011						

Total

741

128

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W368  
 Rueb 1-9  
 West St. Francis  
 St. Francis  
 Pumping Unit/Elec  
 October-11  
 Chart Meter

DATE	Casing PSI	STATIC MCF	SPM	HRS CYCLE DOWN	Water BBLs	REMARKS (Maximum length 110 characters)
10/1/2011	72	85	20	6 0	0	pu off hfp
10/2/2011	65	78	21	6 4	0	restart pu
10/3/2011	65	78	25	6 8	10	
10/4/2011	63	76	25	6 8	10	
10/5/2011	35	48	26	6 8	5	
10/6/2011	55	68	25	6 8	7	
10/7/2011	70	83	23	6 4	3	shut pumping unit off hfp
10/8/2011	35	48	23	6 4	0	started pumping unit tighten belts
10/9/2011	30	43	25	6 4	12	
10/10/2011	30	43	26	6 4	7	
10/11/2011	30	43	26	6 4	8	
10/12/2011	30	43	26	6 4	8	
10/13/2011	30	43	26	6 4	7	
10/14/2011	30	43	25	6 4	5	
10/15/2011	30	43	25	6 4	8	
10/16/2011	30	43	25	6 4	6	
10/17/2011	30	43	25	6 4	7	
10/18/2011	30	43	25	6 4	8	
10/19/2011	30	43	25	6 4	5	
10/20/2011	30	43	25	6 4	7	
10/21/2011	30	43	25	6 4	7	
10/22/2011	30	43	25	6 4	7	
10/23/2011	30	43	25	6 4	5	
10/24/2011	30	43	25	6 4	8	
10/25/2011	30	43	25	6 4	7	
10/26/2011	30	43	25	6 4	8	
10/27/2011	30	43	25	6 4	2	
10/28/2011	30	43	25	6 4	8	
10/29/2011	30	43	25	6 4	5	
10/30/2011	23	36	24	6 4	4	
10/31/2011	26	39	25	6 4	5	

Total

766

189

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W368  
 Rueb 1-9  
 West St. Francis  
 St. Francis  
 Pumping Unit/Elec  
 November-11  
 Chart Meter

DATE	Casing PSI	STATIC MCF	SPM	HRS CYCLE DOWN	Water BBLs	REMARKS (Maximum length 110 characters)
11/1/2011	25	38	25	6 4	7	
11/2/2011	25	38	25	6 4	5	
11/3/2011	25	38	25	6 4	5	
11/4/2011	25	38	25	6 4	5	
11/5/2011	25	38	25	6 4	8	
11/6/2011	25	38	25	6 4	5	
11/7/2011	30	43	25	6 4	5	
11/8/2011	30	43	25	6 4	7	
11/9/2011	30	43	25	6 4	7	
11/10/2011	30	43	25	6 4	7	
11/11/2011	40	53	27	6 4	7	
11/12/2011	65	78	22	6 2	4	pu off hfp
11/13/2011	50	63	26	6 2	4	restart pu
11/14/2011	36	49	23	6 4	5	
11/15/2011	28	41	25	6 4	6	
11/16/2011	35	48	25	6 4	3	
11/17/2011	33	46	25	6 4	5	
11/18/2011	33	46	23	6 4	7	
11/19/2011	33	46	23	6 4	9	
11/20/2011	33	46	23	6 4	5	
11/21/2011	30	43	23	6 4	5	
11/22/2011	30	43	24	6 4	7	
11/23/2011	30	43	22	6 4	3	
11/24/2011	31	44	22	6 4	5	
11/25/2011	35	48	23	6 4	8	
11/26/2011	31	44	23	6 4	3	
11/27/2011	30	43	23	6 4	10	
11/28/2011	30	43	23	6 4	3	
11/29/2011	31	44	23	6 4	2	
11/30/2011	30	43	23	6 4	5	
12/1/2011	0	0	0	0 0	0	0

Total

721

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