

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

(See Instructions on Reverse Side)

Type Test:

- Open Flow **AST**  
 Deliverability

Test Date:  
6/15/2011

API No. 15  
15-023-20591-00-00

Company Rosewood Resources		Lease Dunn		Well Number 1-13	
County Cheyenne	Location SWNW	Section 13	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 1477'		Packer Set at	
Casing Size 4 1/2"	Weight 10.5#	Internal Diameter 4.052	Set at 1487'	Perforations 1300'	To 1336'
Tubing Size <del>2 3/8"</del> <b>2 3/8"</b>	Weight	Internal Diameter	Set at <b>1350'</b>	Perforations	To
Type Completion (Describe) Single (Conventional)		Type Fluid Production Dry Gas		Pump Unit or Travelling Plunger? <input checked="" type="radio"/> Yes / No Pumping Unit	
Producing Thru (Annulus / Tubing) Annulus		% Carbon Dioxide		% Nitrogen	
Vertical Depth(H) 1336'		Pressure Taps Flange		Gas Gravity - G <sub>g</sub> .6	
				(Meter Run) (Prover) Size 2"	
Pressure Bulldup: Shut in <u>6-14</u> 20 <u>11</u> at <u>8:50</u> <input checked="" type="radio"/> (AM) (PM)		Taken <u>6-15</u> 20 <u>11</u> at <u>9:05</u> <input checked="" type="radio"/> (AM) (PM)			
Well on Line: Started <u>6-15</u> 20 <u>11</u> at <u>9:05</u> <input checked="" type="radio"/> (AM) (PM)		Taken <u>6-16</u> 20 <u>11</u> at <u>9:50</u> <input checked="" type="radio"/> (AM) (PM)			

### 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>e</sub> )		Tubing Wellhead Pressure (P <sub>w</sub> ) or (P <sub>i</sub> ) or (P <sub>e</sub> )		Duration (Hours)	Liquid Produced (Barrels)
						psig	psia	psig	psia		
Shut-In						38	52.4				
Flow						60	74.4			24	0

### FLOW STREAM ATTRIBUTES

Plate Coefficient (F <sub>s</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>
						29		

### (OPEN FLOW) (DELIVERABILITY) CALCULATIONS

(P<sub>e</sub>)<sup>2</sup> = \_\_\_\_\_ : (P<sub>w</sub>)<sup>2</sup> = \_\_\_\_\_ : P<sub>d</sub> = \_\_\_\_\_ % (P<sub>e</sub> - 14.4) + 14.4 = \_\_\_\_\_ : (P<sub>w</sub>)<sup>2</sup> = 0.207  
(P<sub>e</sub>)<sup>2</sup> = \_\_\_\_\_

(P <sub>e</sub> ) <sup>2</sup> - (P <sub>w</sub> ) <sup>2</sup> or (P <sub>e</sub> ) <sup>2</sup> - (P <sub>d</sub> ) <sup>2</sup>	(P <sub>e</sub> ) <sup>2</sup> - (P <sub>w</sub> ) <sup>2</sup>	Choose formula 1 or 2: 1. P <sub>e</sub> <sup>2</sup> - P <sub>d</sub> <sup>2</sup> 2. P <sub>e</sub> <sup>2</sup> - P <sub>w</sub> <sup>2</sup> divided by: P <sub>e</sub> <sup>2</sup> - P <sub>w</sub> <sup>2</sup>	LOG of formula 1, or 2, and divide by: $\frac{P_e^2 - P_w^2}{P_e^2 - P_d^2}$	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 the 28 day of December, 20 11.

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

*Janell Sewer*  
\_\_\_\_\_  
For Company

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KCC WICHITA

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 Dunn 1-13 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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W346

Dunn 1-13

St. Francis

St. Francis

None

June-11

FloBoss

DATE	Tubing Casing		STATIC	MCF	SPM	CYCLE	HRS	DOWN	Water	BBLs	REMARKS (Maximum length 110 characters)
	PSI	PSI									
6/1/2011		63	76	17	6.5	0			0		needs wo pu off
6/2/2011		58	71	15	6.5	0			0		
6/3/2011		56	69	17	6.5	0			0		
6/4/2011		56	69	18	6.5	0			0		needs wo pu off
6/5/2011		57	70	18	6.5	0			0		
6/6/2011		57	70	19	6.5	0			0		
6/7/2011		55	68	18	6.5	0			0		needs wo pu off
6/8/2011		56	69	19	6.5	0			0		
6/9/2011		56	69	20	6.5	6					9 wo complete restart pu
6/10/2011		56	69	11	6.5	12					16 5.5 min bt greased
6/11/2011		57	70	15	6.5	12					17
6/12/2011		57	70	15	6.5	12					15
6/13/2011		57	70	17	6.5	12					17 5 min bt
6/14/2011		56	69	18	6.5	6					9 si 24 hrs squeezed
6/15/2011		38	51	0	6.5	6		24			8 reopen well restart pu
6/16/2011		62	75	29	6.5	12					16
6/17/2011		61	74	29	6.5	12					17
6/18/2011		60	73	29	6.5	12					18
6/19/2011		60	73	29	6.5	12					17
6/20/2011		60	73	29	6.5	12					16
6/21/2011		60	73	30	6.5	12					21 4 min bt
6/22/2011		60	73	31	6.5	12					22
6/23/2011		72	85	31	6.5	12		1			21
6/24/2011		60	73	31	6.5	12					22
6/25/2011		59	72	32	6.5	12					22
6/26/2011		59	72	32	6.5	12					20
6/27/2011		59	72	32	6.5	12					29 3 min bt
6/28/2011		59	72	33	6.5	12					30
6/29/2011		60	73	33	6.5	12					28
6/30/2011		60	73	34	6.5	12					25
7/1/2011											

Total

701

415

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W346  
 Dunn 1-13  
 St. Francis  
 St. Francis  
 None  
 July-11  
 FloBoss

DATE	Tubing Casing		STATIC MCF	SPM	HRS	CYCLE DOWN	Water BLS	REMARKS (Maximum length 110 characters)
	PSI	PSI						
7/1/2011		60	73	34	6.5	12	29	
7/2/2011		61	74	35	6.5	12	30	
7/3/2011		61	74	35	6.5	12	29	
7/4/2011		61	74	35	6.5	12	27	
7/5/2011		60	73	36	6.5	12	30	
7/6/2011		59	72	36	6.5	12	21	4 min bt greased
7/7/2011		60	73	36	6.5	12	22	
7/8/2011		60	73	37	6.5	12	24	
7/9/2011		60	73	37	6.5	12	19	
7/10/2011		60	73	38	6.5	12	22	
7/11/2011		59	72	38	6.5	12	21	4 min bt
7/12/2011		59	72	39	6.5	12	20	
7/13/2011		58	71	39	6.5	12	1	19
7/14/2011		59	72	37	6.5	12	18	
7/15/2011		60	73	40	6.5	12	23	
7/16/2011		61	74	40	6.5	12	21	
7/17/2011		66	79	40	6.5	12	20	
7/18/2011		62	75	40	6.5	6	10	turned off pu, high field pressure
7/19/2011		62	75	37	6.5	6	2	10 restart pu 4 min bt
7/20/2011		60	73	37	6.5	12	22	
7/21/2011		67	80	37	6.5	6	10	pu off hfp
7/22/2011		57	70	35	6.5	6	10	restart pu
7/23/2011		57	70	33	6.5	12	21	
7/24/2011		57	70	32	6.5	12	22	
7/25/2011		57	70	32	6.5	12	24	
7/26/2011		56	69	31	6.5	12	20	
7/27/2011		57	70	30	6.5	12	24	
7/28/2011		58	71	30	6.5	12	16	5.5 min bt
7/29/2011		55	68	31	6.5	12	14	
7/30/2011		58	58	33	6.5	12	15	
7/31/2011		46	59	33	6.5	12	16	

Total

1103

570

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W346  
 Dunn #13  
 St. Francis  
 St. Francis  
 None  
 August-11  
 FloBoss

DATE	Tubing PSI	Casing PSI	STATIC	MCF	SPM	HRS CYCLE DOWN	Water BBLs	REMARKS (Maximum length 110 characters)
8/1/2011		59	72	34	6.5	12	16	
8/2/2011		58	71	34	6.5	12	15	
8/3/2011		59	72	34	6.5	12	16	5.5 min bt
8/4/2011		58	71	35	6.5	6	8	pu off water leak
8/5/2011		57	70	33	6.5	0	0	pu off water leak
8/6/2011		58	71	31	6.5	0	0	pu off water leak
8/7/2011		57	70	31	6.5	0	0	pu off water leak
8/8/2011		56	69	30	6.5	6	8	restart pu
8/9/2011		57	70	29	6.5	12	12	7 min bt greased
8/10/2011		53	66	31	6.5	12	14	
8/11/2011		68	81	31	6.5	12	10	
8/12/2011		89	102	33	6.5	6	4	pu off high fp
8/13/2011		76	89	31	6.5	0	0	
8/14/2011		74	87	30	6.5	0	0	
8/15/2011		84	97	29	6.5	0	0	
8/16/2011		58	71	30	6.5	6	6	restart pu
8/17/2011		101	114	27	6.5	6	5	6 pu off hfp
8/18/2011		56	69	29	6.5	6	4	6 restart pu
8/19/2011		64	77	27	6.5	6	1	12
8/20/2011		57	70	27	6.5	6	13	
8/21/2011		57	70	27	6.5	6	14	
8/22/2011		56	69	27	6.5	6	8	5.5 min bt
8/23/2011		77	90	28	6.5	6	9	
8/24/2011		53	66	30	6.5	6	10	
8/25/2011		58	71	30	6.5	6	11	
8/26/2011		56	69	31	6.5	6	9	
8/27/2011		57	70	31	6.5	6	8	
8/28/2011		57	70	32	6.5	6	9	
8/29/2011		58	71	32	6.5	6	9	
8/30/2011		58	71	32	6.5	6	10	4.5 min bt
8/31/2011		57	70	32	6.5	6	8	

Total

948

220

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