

# KANSAS CORPORATION COMMISSION

## ONE POINT STABILIZED OPEN FLOW OR DELIVERABILITY TEST

Type Test:

(See Instructions on Reverse Side)

- Open Flow **ASL**
- Deliverability

Test Date:  
8/15/2012

API No. 15  
023-20665-0000

Company Rosewood Resources, Inc.		Lease Northrup		Well Number 43-33	
County Cheyenne	Location NESE	Section 33	TWP 2S	RNG (E/W) 42W	Acres Attributed 80
Field Cherry Creek		Reservoir Niobrara		Gas Gathering Connection Branch Systems Inc.	
Completion Date 4-1-2006		Plug Back Total Depth 1766'		Packer Set at	
Casing Size 4 1/2"	Weight 10.5#	Internal Diameter 4.052	Set at 1767.06'	Perforations 1616'	To 1642'
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? <input checked="" type="checkbox"/> Yes / No Pumping Unit	
Producing Thru (Annulus / Tubing) Annulus		% Carbon Dioxide		% Nitrogen Gas Gravity - G <sub>g</sub> .6	
Vertical Depth(H) 1642'		Pressure Taps Flange		(Meter Run) (Prover) Size 2"	
Pressure Buildup: Shut in 8-14		20 12 at 11:45		(AM)(PM) Taken 8-15	
Well on Line: Started 8-15		20 12 at 11:55		(AM)(PM) Taken 8-16	

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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						96	110.4				
Flow						27	41.4			24	

### FLOW STREAM ATTRIBUTES

Plate Coefficient (F <sub>a</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 (Mcfd)	GOR (Cubic Feet/ Barrel)	Flowing Fluid Gravity G <sub>m</sub>
						19		

### (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>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: $\frac{P_c^2 - P_w^2}{P_c^2 - P_a^2}$	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 the 19 day of December, 20 12.

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

Jannell Belew  
For Company

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

\_\_\_\_\_  
Checked by

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Form G-2  
(Rev. 7/03)

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 Northrup 43-33 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: 12/19/12

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.

W2059  
 Northrup 43-33  
 West St. Francis  
 St. Francis  
 None  
 August-12

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DATE	Tubing Casing		STATIC	MCF	SPM	CYCLE	HRS DOWN	Water BBLs	REMARKS (Maximum length 110 characters)
	PSI	PSI							
8/1/2012		28	41	2	6	12		17	
8/2/2012		28	41	4	6	12		16	
8/3/2012		28	41	3	6	24		34	
8/4/2012		51	64	15	6	24		33	
8/5/2012		57	70	12	6	24		32	
8/6/2012		46	59	18	6	24		33	
8/7/2012		32	45	19	6	12		16	put back on auto mcf up
8/8/2012		32	45	19	6	12		17	bucket test 5 min
8/9/2012		30	43	18	6	12		16	
8/10/2012		30	43	18	6	12		15	
8/11/2012		64	77	13	6	12	1.5	16	
8/12/2012		36	49	17	6	12		17	
8/13/2012		29	42	17	6	12		15	
8/14/2012		23	38	17	6	6			8 shut well in for state test psi 23
8/15/2012		96	43	0	6	0	24	0	open well psi 96
8/16/2012		27	40	22	6	6			8 started pumping unit
8/17/2012		31	44	19	6	12		16	
8/18/2012		30	43	19	6	12		17	
8/19/2012		30	43	19	6	12		15	
8/20/2012		30	43	19	6	12		16	
8/21/2012		30	43	19	6	12		17	
8/22/2012		31	44	19	6	12		18	
8/23/2012		31	44	19	6	12		17	
8/24/2012		27	40	19	6	12		17	bucket test 5 min
8/25/2012		27	40	19	6	12		16	
8/26/2012		31	44	19	6	12		15	
8/27/2012		31	44	19	6	12		16	
8/28/2012		36	49	19	6	12		17	
8/29/2012		31	44	19	6	12		18	
8/30/2012		31	44	19	6	12		17	bucket test 5 min
8/31/2012		33	46	19	6	12		17	

Total

499

542

W2059  
 Northrup 43-33  
 West St. Francis  
 St. Francis  
 None  
 September-12

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DATE	Casing PSI	STATIC	MCF	SPM	HRS CYCLE DOWN	Water BBLs	REMARKS (Maximum length 110 characters)
9/1/2012	32	45	19	6	12	16	
9/2/2012	32	45	19	6	12	15	
9/3/2012	32	45	19	6	12	16	
9/4/2012	32	45	19	6	12	17	
9/5/2012	67	80	11	6	12	1	16
9/6/2012	32	45	11	6	12		15 shut pumping unit off hfp
9/7/2012	97	110	2	6	0	19	0
9/8/2012	100	113	0	6	0	24	0
9/9/2012	103	116	0	6	0	24	0
9/10/2012	104	117	0	6	0	24	0
9/11/2012	105	118	0	6	0	24	0
9/12/2012	107	120	0	6	0	24	0
9/13/2012	110	123	0	6	0	10	0
9/14/2012	98	111	0	6	0		0
9/15/2012	91	104	10	6	0		0
9/16/2012	86	99	15	6	0		0
9/17/2012	77	90	18	6	0		0
9/18/2012	33	46	20	6	6		0 started pumping unit
9/19/2012	83	96	13	6	3		6 shut pumping unit off hfp
9/20/2012	26	39	15	6	6		8 started pumping unit
9/21/2012	31	44	15	6	12	16	
9/22/2012	31	44	15	6	12	17	
9/23/2012	31	44	16	6	12	18	
9/24/2012	31	44	15	6	12	17	
9/25/2012	32	45	15	6	12	17	bucket test 5 min
9/26/2012	32	45	15	6	12	16	
9/27/2012	33	45	15	6	12	17	
9/28/2012	32	55	15	6	12	15	
9/29/2012	33	46	15	6	12	13	
9/30/2012	32	45	16	6	12	17	
10/1/2012							

Total

343

272

W2059

Northrup 43-33

West St. Francis

St. Francis

None

October-12

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DATE	Casing PSI	STATIC	MCF	SPM	HRS CYCLDOWN	Water BBL	REMARKS (Maximum length 110 characters)
10/1/2012	32	45	16	6	12	17	
10/2/2012	31	44	16	6	12	16	
10/3/2012	30	43	17	6	12	15	
10/4/2012	29	42	17	6	12	16	
10/5/2012	31	44	16	6	12	17	
10/6/2012	30	43	16	6	12	16	
10/7/2012	30	43	16	6	12	15	
10/8/2012	31	44	16	6	12	16	
10/9/2012	30	43	16	6	12	17	bucket test 5 min
10/10/2012	32	45	16	6	12	16	
10/11/2012	31	44	16	6	12	15	
10/12/2012	31	44	17	6	12	17	
10/13/2012	31	44	17	6	12	19	
10/14/2012	31	44	17	6	12	16	
10/15/2012	31	44	17	6	12	17	
10/16/2012	45	58	17	6	12	16	
10/17/2012	31	44	17	6	12	17	
10/18/2012	31	44	17	6	12	16	
10/19/2012	30	43	17	6	12	17	bucket test 5 min and treated well
10/20/2012	46	59	16	6	12	16	
10/21/2012	32	45	16	6	12	15	
10/22/2012	32	45	16	6	6	9	shut pumping unit off
10/23/2012	29	42	16	6	0	0	
10/24/2012	27	40	14	6	6	8	
10/25/2012	30	43	15	6	12	17	
10/26/2012	29	42	15	6	12	16	
10/27/2012	29	42	19	6	12	18	
10/28/2012	30	43	16	6	12	17	
10/29/2012	77	90	16	6	6	2	9 pu off hfp
10/30/2012	69	82	12	6	0	0	
10/31/2012	42	55	16	6	6	10	shut pumping unit off

Total

501

446