

KANSAS CORPORATION COMMISSION ONE POINT STABILIZED OPEN FLOW OR DELIVERABILITY TEST

(See Instructions on Reverse Side)

Type Test:

- Open Flow **BSI**
 Deliverability

Test Date:
6/1/2015

API No. 15
023-20666-0000

Company Rosewood Resources, Inc.			Lease Heim		Well Number 31-33	
County Cheyenne	Location NW/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 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"/> No Pumping Unit		
Producing Thru (Annulus / Tubing) Annulus		% Carbon Dioxide		% Nitrogen		Gas Gravity - G _g .6
Vertical Depth(H) 1614'		Pressure Taps Flange			(Meter Run) (Prover) Size 2"	
Pressure Buildup: Shut in 6-1		20 15 at 1:55		(AM) (PM) Taken 6-4		20 15 at 2:10 (AM) (PM)
Well on Line: Started 6-4		20 15 at 2:10		(AM) (PM) Taken 6-5		20 15 at 2:55 (AM) (PM)

OBSERVED SURFACE DATA

Duration of Shut-in **96** Hours

Static / Dynamic Property	Orifice Size (inches)	Circle one: Meter or Prover Pressure psig (P _m)	Pressure Differential in Inches H ₂ O	Flowing Temperature t	Well Head Temperature t	Casing Wellhead Pressure (P _w) or (P _i) or (P _c)		Tubing Wellhead Pressure (P _w) or (P _i) or (P _c)		Duration (Hours)	Liquid Produced (Barrels)
						psig	psia	psig	psia		
Shut-In						97	111.4				
Flow						50	64.4			96	

FLOW STREAM ATTRIBUTES

Plate Coefficient (F ₀) (F ₀) Mcfd	Circle one: Meter or Prover Pressure psia	Press Extension $\sqrt{P_m \times h}$	Gravity Factor F _g	Flowing Temperature Factor F _t	Deviation Factor F _{pv}	Metered Flow R (Mcfd)	GOR (Cubic Feet/ Barrel)	Flowing Fluid Gravity G _m
						40		

(OPEN FLOW) (DELIVERABILITY) CALCULATIONS

(P_c)² = _____ : (P_w)² = _____ : P_d = _____ % (P_c - 14.4) + 14.4 = _____ : (P_g)² = 0.207
(P_d)² = _____

(P _c) ² - (P _g) ² or (P _c) ² - (P _d) ²	(P _g) ² - (P _w) ²	Choose formula 1 or 2: 1. P _c ² - P _d ² 2. P _d ² - P _g ² divided by: P _c ² - P _w ²	LOG of formula 1, or 2, and divide by: $\frac{P_c^2 - P_w^2}{P_c^2 - P_d^2}$	Backpressure Curve Slope = "n" ----- 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 21 day of December, 20 15.

Witness (if any)
KCC WICHITA
Samuel Montury
For Company

For Commission
APR 07 2016
Checked by

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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: 12/21/15

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Signature: *Janell Martinez*
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.

W436 WELL ID
 Heim 31-33 LEASE NAME
 West St. Francis FIELD
 St. Francis AREA
 None EQUIPMENT
 June-15 DATE

DATE	Line PSI	Casing PSI	STATIC	MCF	SPM	HRS CYCLE DOWN	Water BBLs	REMARKS (Maximum length 110 characters)
6/1/2015	77	77	90	0	0	0	24	0
6/2/2015	86	86	99	0	0	0	24	0
6/3/2015	93	93	106	0	0	0	24	0
6/4/2015	97	97	110	0	0	0	24	0
6/5/2015	94	94	107	42	0	0	0	0
6/6/2015	84	84	97	36	6	6	0	0 turn on p u
6/7/2015	77	77	90	41	6	12	0	24
6/8/2015	69	69	82	48	6	12	0	25
6/9/2015	56	56	69	50	6	12	0	24
6/10/2015	54	54	67	45	6	12	0	25
6/11/2015	53	53	66	44	6	12	0	23
6/12/2015	52	52	65	43	6	12	0	24
6/13/2015	51	51	64	42	6	12	0	24
6/14/2015	51	51	64	42	6	12	0	24
6/15/2015	51	51	64	41	6	6	0	17
6/16/2015	51	51	64	39	6	6	0	8 reset pu
6/17/2015	50	50	63	39	6	12	0	22
6/18/2015	52	52	65	38	6	12	0	20
6/19/2015	63	63	76	33	6	6	2	12
6/20/2015	62	62	75	8	6	0	22	
6/21/2015	84	84	97	16	6	0	0	
6/22/2015	64	64	77	48	6	6	0	12 restarted pu
6/23/2015	49	49	62	43	6	12	0	24
6/24/2015	50	50	63	42	6	12	0	24
6/25/2015	50	50	63	41	6	12	0	24
6/26/2015	50	50	63	40	6	12	0	24
6/27/2015	49	49	62	40	6	12	0	23
6/28/2015	50	50	63	39	6	12	0	24
6/29/2015	50	50	63	39	6	12	0	24
6/30/2015	50	50	63	39	6	12	0	24
7/1/2015	-13	-13	0	0			0	

Total

1018

475

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W436 WELL ID
 Hem 31-33 LEASE NAME
 West St. Francis FIELD
 St. Francis AREA
 None EQUIPMENT
 July-15 DATE

DATE	Line PSI	Casing PSI	STATIC	MCF	SPM	HRS CYCLE	DOWN	Water BBLs	REMARKS (Maximum length 110 characters)
7/1/2015	50	50	63	39	6	12	0	24	
7/2/2015	50	50	63	39	6	12	0	24	
7/3/2015	50	50	63	39	6	12	0	24	
7/4/2015	50	50	63	38	6	12	0	24	
7/5/2015	50	50	63	38	6	12	0	24	
7/6/2015	57	57	70	37	6	12	2	22	
7/7/2015	49	49	62	39	6	12	0	24	
7/8/2015	49	49	62	38	6	6	16	12	Shut pu off for comp work
7/9/2015	58	58	71	2	6	0	24	0	
7/10/2015	96	96	109	0	6	0	14	0	
7/11/2015	92	92	105	11	6	0	0	0	
7/12/2015	81	81	94	41	6	0	0	0	
7/13/2015	71	71	84	51	6	6	0	12	restarted... rod heavy big time
7/14/2015	53	53	66	45	6	12	0	24	
7/15/2015	50	50	63	42	6	12	0	24	
7/16/2015	50	50	63	41	6	12	0	24	
7/17/2015	50	50	63	40	6	12	0	24	
7/18/2015	50	50	63	40	6	12	0	24	
7/19/2015	49	49	62	40	6	12	0	24	
7/20/2015	49	49	62	40	6	12	0	24	
7/21/2015	59	59	72	36	6	12	4	24	
7/22/2015	50	50	63	40	6	12	0	24	
7/23/2015	49	49	62	38	6	12	0	24	
7/24/2015	49	49	62	36	6	12	0	24	
7/25/2015	49	49	62	35	6	12	0	24	
7/26/2015	48	48	61	34	6	12	0	24	
7/27/2015	48	48	61	34	6	6	0	12	reset panel
7/28/2015	48	48	61	33	6	0	0	0	
7/29/2015	47	47	60	33	6	6	0	12	not working, beat on drive, auto started working
7/30/2015	47	47	60	36	6	12	0	12	
7/31/2015	48	48	61	38	6	12	0	12	

Total

1093

550

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W436 WELL ID
 Herm 31 33 LEASE NAME
 West St. Francis FIELD
 St. Francis AREA
 None EQUIPMENT
 August-15 DATE

DATE	Line PSI	Casing PSI	STATIC	MCF	SPM	HRS CYCLE DOWN	Water BBLs	REMARKS (Maximum length 110 characters)
8/1/2015	48	48	61	39	6	6	0	12
8/2/2015	49	49	62	39	6	0	0	0
8/3/2015	49	49	62	36	6	0	0	0
8/4/2015	48	48	61	34	6	6	0	8 reset panel
8/5/2015	48	48	61	37	6	12	0	24
8/6/2015	48	48	61	39	6	12	0	24
8/7/2015	48	48	61	39	6	12	0	24
8/8/2015	48	48	61	38	6	12	0	24
8/9/2015	48	48	61	38	6	12	0	24
8/10/2015	48	48	61	38	6	12	0	24
8/11/2015	48	48	61	38	6	12	0	24
8/12/2015	48	48	61	38	6	12	0	24
8/13/2015	49	49	62	37	6	12	0	24
8/14/2015	49	49	62	37	6	12	0	24
8/15/2015	50	50	63	37	6	12	0	24
8/16/2015	51	51	64	36	6	12	0	24
8/17/2015	49	49	62	35	6	12	0	24
8/18/2015	49	49	62	34	6	12	0	24
8/19/2015	50	50	63	33	6	0	0	0 Belts have been broken
8/20/2015	49	49	62	32	6	6	0	12 Replaced belts
8/21/2015	50	50	63	36	6	12	0	24
8/22/2015	51	51	64	37	6	12	0	24
8/23/2015	51	51	64	37	6	12	0	24
8/24/2015	50	50	63	37	6	12	0	24
8/25/2015	52	52	65	36	6	12	0	24
8/26/2015	51	51	64	37	6	12	0	24
8/27/2015	50	50	63	37	6	12	0	24
8/28/2015	50	50	63	37	6	12	0	24
8/29/2015	51	51	64	36	6	12	0	24
8/30/2015	54	54	67	35	6	12	0	24
8/31/2015	56	56	69	35	6	12	0	24

Total

1134

632

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