

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

Type Test:

- Open Flow  
 Deliverability

(See Instructions on Reverse Side)

Date: 6/6/2013

API No. 15  
023-21259-0000

Company Rosewood Resources, Inc.		Lease Zweygardt		Well Number 32-19	
County Cheyenne	Location SWNE	Section 19	TWP 3S	RNG (E/W) 40W	Acres Attributed 80
Field Cherry Creek		Reservoir Niobrara		Gas Gathering Connection Branch Systems Inc.	
Completion Date 9/26/2010		Plug Back Total Depth 1471'		Packer Set at	
Casing Size 4 1/2"	Weight 10.5#	Internal Diameter 6.366	Set at 1509'	Perforations 1286'	To 1316'
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? Yes / <b>No</b>	
Producing Thru (Annulus / Tubing) Annulus		% Carbon Dioxide		% Nitrogen	
Vertical Depth(H) 1525'		Pressure Taps Flange		(Meter Run) (Prover) Size 2"	
Pressure Buildup: Shut in 6-5 20 13 at 5:50 (AM) (PM) Taken 6-6 20 13 at 6:10 (AM) (PM)		Well on Line: Started 6-6 20 13 at 6:10 (AM) (PM) Taken 6-7 20 13 at 6:30 (AM) (PM)			

### OBSERVED SURFACE DATA

Duration of Shut-in 24 Hours

Static / Dynamic Property	Orifice Size (inches)	Circle one: Meter Prover Pressure psig (Pm)	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						229	243.4				
Flow						70	84.4			24	

### 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 (Mcf/d)	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 (Mcf/d)

Open Flow

Mcf/d @ 14.65 psia

Deliverability

Mcf/d @ 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 \_\_\_\_\_ day of November, 20 13.

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DEC 26 2013

*Genard Matney*  
For Company

Witness (if any)

For Commission

CONSERVATION DIVISION  
WICHITA KS

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 Zweygardt 32-19 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: 11/21/13

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Signature: *Janell Matney*  
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.

W2737  
 Zweygardt 32-19  
 St. Francis  
 St. Francis  
 Flow  
 June-13  
 FloBoss

DATE	Casing PSI	STATIC	MCF	HRS DOWN	REMARKS (Maximum length 110 characters)
6/1/2013	49	62		11	
6/2/2013	53	66		11	
6/3/2013	51	64		11	
6/4/2013	50	63		11	
6/5/2013	54	67		11	si for state test - cp 60
6/6/2013	63	76		0	24 reopened - cp 229
6/7/2013	59	72		18	
6/8/2013	54	67		12	
6/9/2013	58	71		12	
6/10/2013	89	102		12	2
6/11/2013	77	90		11	1
6/12/2013	76	89		11	
6/13/2013	58	71		11	
6/14/2013	58	71		11	
6/15/2013	63	76		11	
6/16/2013	62	75		11	
6/17/2013	60	73		11	
6/18/2013	56	69		15	
6/19/2013	50	63		14	
6/20/2013	56	69		0	run tbg and rods downhole
6/21/2013	63	76		0	
6/22/2013	77	90		0	
6/23/2013	81	94		0	
6/24/2013	77	90		0	
6/25/2013	83	96		15	
6/26/2013	80	93		10	
6/27/2013	70	83		10	
6/28/2013	54	67		10	
6/29/2013	54	67		9	
6/30/2013	54	67		9	
7/1/2013					

Total

278

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W2737  
 Zweygardt 32-19  
 St. Francis  
 St. Francis  
 Flow  
 July-13  
 FloBoss

DATE	Casing PSI	STATIC MCF	SPM	HRS CYCL	DOWN	Water BBS	REMARKS (Maximum length 110 characters)
7/1/2013	56	69	8				
7/2/2013	59	72	9				
7/3/2013	55	68	9				
7/4/2013	59	72	9				
7/5/2013	57	70	9				
7/6/2013	61	74	9				
7/7/2013	70	83	9				
7/8/2013	68	81	8				
7/9/2013	66	79	8				
7/10/2013	63	76	8				
7/11/2013	66	79	8				
7/12/2013	72	85	8				
7/13/2013	76	89	2			2.5	
7/14/2013	78	91	8				
7/15/2013	58	71	8				
7/16/2013	56	69	8	5.6	12		49 bringing water @ 9:50 am - 3.5 min bt
7/17/2013	54	67	12	5.6	24		46 3.5 min bt
7/18/2013	83	96	15	5.6	12		22 pu off hfp
7/19/2013	74	87	17	5.6	0		0
7/20/2013	75	88	14	5.6	0		0
7/21/2013	76	89	13	5.6	0		0
7/22/2013	72	85	13	5.6	0		0
7/23/2013	71	84	12	5.6	12		22 restart pu
7/24/2013	78	91	17	5.6	24		33 5 25 min bt
7/25/2013	81	94	22	5.6	12		22 pu off hfp
7/26/2013	70	83	19	5.6	12		22 restart pu
7/27/2013	60	73	22	5.6	24		49
7/28/2013	71	84	18	5.6	12		25 pumping unit off restarted
7/29/2013	60	73	22	5.6	12		25 pu off, couldn't keep running, left off
7/30/2013	94	107	19	5.6	6	3.5	22 pu off hfp
7/31/2013	117	130	14	5.6	0	5.5	0

Total

377

337

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W2737  
 Zweygartd 32-19  
 St. Francis  
 St. Francis  
 Flow  
 August-13  
 FloBoss

DATE	Casing PSI	STATIC MCF	SPM	HRS CYCLE	Water DOWN	BBLs	REMARKS (Maximum length 110 characters)
8/1/2013	80	93	19	5.6			
8/2/2013	80	93	16	5.6			
8/3/2013	75	88	16	5.6			
8/4/2013	76	89	16	5.6			
8/5/2013	67	80	14	5.6			
8/6/2013	58	71	14	5.6			
8/7/2013	53	66	14	5.6	12		23 restart pu
8/8/2013	57	70	16	5.6	24		46
8/9/2013	60	73	14	5.6	12		23 pu off, couldn't keep running
8/10/2013	58	71	14	5.6	12		23 changed spark plugs & started pu
8/11/2013	59	72	20	5.6	24		46
8/12/2013	61	74	27	5.6	24		46
8/13/2013	63	76	31	5.6	24		44
8/14/2013	65	78	36	5.6	24		43
8/15/2013	68	81	40	5.6	24	0.5	41
8/16/2013	77	90	43	5.6	24		41
8/17/2013	80	93	47	5.6	24		40
8/18/2013	82	95	49	5.6	24		43
8/19/2013	84	97	52	5.6	24	1.5	41 PU off
8/20/2013	96	109	48	5.6	0	1	0
8/21/2013	92	105	37	5.6	0		0
8/22/2013	94	107	33	5.6	0	5	0
8/23/2013	79	92	30	5.6	0		0
8/24/2013	87	100	28	5.6	0	1	0
8/25/2013	92	105	26	5.6	0	1	0
8/26/2013	62	75	26	5.6	0		0
8/27/2013	57	70	26	5.6	0		0 low oil, left off
8/28/2013	56	69	24	5.6	0		0
8/29/2013	87	100	23	5.6	0	1	0 high psi
8/30/2013	89	102	23	5.6	0		0
8/31/2013	89	102	22	5.6	0		0

Total

844

500

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