

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

(See Instructions on Reverse Side)

Type Test:

- Open Flow **RISD**  
 Deliverability

Test Date:  
6/22/14

API No. 15  
023-20565-0000

Company Rosewood Resources, Inc.		Lease Zweygardt			Well Number 1-24
County Cheyenne	Location SWNE	Section 24	TWP 3S	RNG (E/W) 41W	Acres Attributed 80
Field Cherry Creek		Reservoir Niobrara		Gas Gathering Connection Branch Systems Inc.	
Completion Date 7-10-2004		Plug Back Total Depth 1368'		Packer Set at	
Casing Size 4 1/2"	Weight 10.5#	Internal Diameter 4.052	Set at 1411'	Perforations 1216'	To 1254'
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="radio"/> Yes <input type="radio"/> No Pumping Unit	
Producing Thru (Annulus / Tubing) Annulus		% Carbon Dioxide		% Nitrogen	
Vertical Depth(H) 1254'		Pressure Taps Flange		Gas Gravity - G <sub>g</sub> .6 (Meter Run) (Prover) Size 2"	
Pressure Buildup: Shut in 6-7		20 14	at 9:30	<input checked="" type="radio"/> (AM) <input type="radio"/> (PM) Taken 6-21	20 14 at 9:45 <input checked="" type="radio"/> (AM) <input type="radio"/> (PM)
Well on Line: Started 6-22		20 14	at 9:45	<input checked="" type="radio"/> (AM) <input type="radio"/> (PM) Taken 6-23	20 14 at 10:30 <input checked="" type="radio"/> (AM) <input type="radio"/> (PM)

### OBSERVED SURFACE DATA

Duration of Shut-in 360 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>r</sub> ) or (P <sub>c</sub> )		Tubing Wellhead Pressure (P <sub>w</sub> ) or (P <sub>r</sub> ) or (P <sub>c</sub> )		Duration (Hours)	Liquid Produced (Barrels)
						psig	psia	psig	psia		
Shut-In						123	137.4				
Flow						58	72.4			360	

### 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>
						43		

### (OPEN FLOW) (DELIVERABILITY) CALCULATIONS

(P<sub>c</sub>)<sup>2</sup> = \_\_\_\_\_ ; (P<sub>w</sub>)<sup>2</sup> = \_\_\_\_\_ ; P<sub>c</sub> = \_\_\_\_\_ % (P<sub>c</sub> - 14.4) + 14.4 = \_\_\_\_\_ ; (P<sub>s</sub>)<sup>2</sup> = 0.207 ; (P<sub>o</sub>)<sup>2</sup> = \_\_\_\_\_

(P <sub>c</sub> ) <sup>2</sup> - (P <sub>o</sub> ) <sup>2</sup> or (P <sub>o</sub> ) <sup>2</sup> - (P <sub>w</sub> ) <sup>2</sup>	(P <sub>o</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>a</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 12 day of December, 20 14.

Received  
KANSAS CORPORATION COMMISSION

*Janell Martines*  
For Company

Witness (if any)

**FEB 25 2015**

For Commission

Checked by

CONSERVATION DIVISION  
WICHITA, KS

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 1-24 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: 12/12/14

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KANSAS CORPORATION COMMISSION

FEB 25 2015

CONSERVATION DIVISION  
WICHITA, KS

Signature: \_\_\_\_\_

Title: Production Assistant

*Arnold Matney*

**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.

W384

Zweygardt 01-24

St. Francis

St. Francis

None

June-18<sup>th</sup>

FloBoss

DATE	Casing PSI	STATIC	MCF	HRS DOWN	REMARKS (Maximum length 110 characters)
6/1/2013	57	70	42	0	
6/2/2013	61	74	34	0	
6/3/2013	76	89	44	0	turn on pumping unit
6/4/2013	68	81	30	0	
6/5/2013	60	73	47	0	
6/6/2013	53	66	42	0	turn off pumping unit
6/7/2013	107	120	23	9	
6/8/2013	110	123	0	24	
6/9/2013	113	126	0	24	
6/10/2013	115	128	0	24	
6/11/2013	116	129	0	24	
6/12/2013	117	130	0	24	
6/13/2013	118	131	0	24	
6/14/2013	119	132	0	24	
6/15/2013	120	133	0	24	
6/16/2013	121	134	0	24	
6/17/2013	121	134	0	24	
6/18/2013	122	135	0	24	
6/19/2013	122	135	0	24	
6/20/2013	122	135	0	24	
6/21/2013	123	136	0	24	
6/22/2013	123	136	0	24	
6/23/2013	118	131	2	5	
6/24/2013	109	122	21	0	
6/25/2013	104	117	36	0	
6/26/2013	92	105	49	0	
6/27/2013	87	100	49	0	
6/28/2013	67	80	57	0	
6/29/2013	56	69	47	0	started pumping unit
6/30/2013	57	70	45	0	
7/1/2013				0	

Total

568

Received  
KANSAS CORPORATION COMMISSION

FEB 25 2015

CONSERVATION DIVISION  
WICHITA, KS

W384

Zweygartd 01-24

St. Francis

St. Francis

None

July-14

FloBoss

DATE	Casing PSI	STATIC	MCF	SPM	CYCLE	HRS DOWN	Water BBLs	
7/1/2014	57	70	45	7.5	6	0	9	
7/2/2014	56	69	44	7.5	6	0	10	
7/3/2014	57	70	43	7.5	6	0	8	
7/4/2014	57	70	43	7.5	6	0	9	
7/5/2014	58	71	43	7.5	6	0	10	
7/6/2014	58	71	43	7.5	6	0	9	
7/7/2014	67	80	38	7.5	6	0	8	
7/8/2014	58	71	43	7.5	6	0	10	
7/9/2014	60	73	43	7.5	6	0	9	
7/10/2014	60	73	40	7.5	6	0	10	
7/11/2014	63	76	38	7.5	6	0	8	
7/12/2014	62	75	40	7.5	6	0	9	
7/13/2014	63	76	39	7.5	6	0	10	
7/14/2014	84	101	37	7.5	6	0	8	
7/15/2014	54	67	42	7.5	6	0	9	
7/16/2014	56	69	41	7.5	6	0	10	
7/17/2014	57	70	41	7.5	6	0	9	
7/18/2014	58	71	41	7.5	6	0	8	
7/19/2014	54	67	39	7.5	6	0	9	
7/20/2014	56	69	39	7.5	6	0	10	
7/21/2014	100	113	38	7.5	6	0	9	
7/22/2014	105	118	1	7.5	6	22	8	
7/23/2014	81	94	14	7.5	6	7	10	
7/24/2014	51	64	40	7.5	6	3	8	
7/25/2014	55	68	33	7.5	6	4	2	
7/26/2014	53	66	45	7.5	0	0	0	
7/27/2014	55	68	42	7.5	6	0	4	
7/28/2014	54	67	42	7.5	6	0	9	
7/29/2014	54	67	39	7.5	6	0	10	
7/30/2014	56	69	39	7.5	6	0	10	
7/31/2014	56	69	39	7.5	6	0	8	

Total

1194

260

Received  
KANSAS CORPORATION COMMISSION

FEB 25 2015

CONSERVATION DIVISION  
WICHITA, KS

W384

Zweygart 01-24

St. Francis

St. Francis

None

August-14

FloBoss

DATE	Casing PSI	STATIC	MCF	SPM	CYCLE	HRS DOWN	Water BBLs	REMARKS (Maximum length 110 characters)
8/1/2014	56	69	39	7.5	1	0	9	
8/2/2014	55	68	39	7.5	1	0	9	
8/3/2014	55	68	39	7.5	1	0	9	
8/4/2014	55	68	39	7.5	1	0	9	
8/5/2014	56	69	39	7.5	1	0	9	
8/6/2014	56	69	39	7.5	1	0	9	
8/7/2014	57	70	38	7.5	1	0	9	
8/8/2014	57	70	37	7.5	1	0	9	
8/9/2014	59	72	38	7.5	1	0	9	
8/10/2014	59	72	38	7.5	1	0	9	
8/11/2014	67	80	37	7.5	1	0	9	
8/12/2014	55	68	37	7.5	1	0	9	
8/13/2014	56	69	39	7.5	1	0	9	
8/14/2014	54	67	39	7.5	1	0	9	
8/15/2014	60	73	28	7.5	1	3	9	
8/16/2014	59	72	38	7.5	1	0	9	
8/17/2014	60	73	35	7.5	1	0	9	2 min BT
8/18/2014	59	72	37	7.5	1	0	9	
8/19/2014	67	80	31	7.5	1	2	9	
8/20/2014	58	71	37	7.5	1	0	9	
8/21/2014	57	70	39	7.5	1	0	9	
8/22/2014	60	73	38	7.5	1	0	9	
8/23/2014	54	67	38	7.5	1	0	9	
8/24/2014	55	68	37	7.5	1	0	9	
8/25/2014	80	93	34	7.5	1	0	9	
8/26/2014	57	70	38	7.5	1	0	9	
8/27/2014	68	81	36	7.5	1	0	9	
8/28/2014	77	90	39	7.5	1	0	4.5	
8/29/2014	53	66	25	7.5	1	5	4.5	
8/30/2014	53	66	40	7.5	1	0	9	
8/31/2014	67	80	37	7.5	1	0	9	

Total

1144

270

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