

KANSAS CORPORATION COMMISSION

ONE POINT STABILIZED OPEN FLOW OR DELIVERABILITY TEST

Type Test:

(See Instructions on Reverse Side)

- Open Flow **AST**
 Deliverability

Test Date:
6/22/14

API No. 15
023-21255-0000

Company Rosewood Resources, Inc.		Lease Zweygardt		Well Number 13-19	
County Cheyenne	Location NWSW	Section 19	TWP 3S	RNG (E/W) 40W	Acres Attributed 80
Field Cherry Creek		Reservoir Niobrara		Gas Gathering Connection Branch Systems Inc.	
Completion Date 11/12/10		Plug Back Total Depth 1500'		Packer Set at	
Casing Size 4 1/2"	Weight 10.5#	Internal Diameter 6.366	Set at 1500'	Perforations 1334'	To 1364'
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 <input checked="" type="checkbox"/> No <input type="checkbox"/>	
Producing Thru (Annulus / Tubing) Annulus		% Carbon Dioxide		% Nitrogen	
Vertical Depth(H) 1515'		Pressure Taps Flange		(Meter Run) (Prover) Size 2"	
Pressure Buildup: Shut in 6-7		20 14 at 5:10		(AM) (PM) Taken 6-11	
Well on Line: Started 6-22		20 14 at 5:25		(AM) (PM) Taken 6-23	

OBSERVED SURFACE DATA

Duration of Shut-in 360 Hours

Static / Dynamic Property	Orifice Size (inches)	Circle one: Meter 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 ₁) or (P _c)		Tubing Wellhead Pressure (P _w) or (P ₁) or (P _c)		Duration (Hours)	Liquid Produced (Barrels)
						psig	psia	psig	psia		
Shut-in						222	236.4				
Flow						64	78.4			360	

FLOW STREAM ATTRIBUTES

Plate Coefficient (F _b) (F _p) 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
						10		

(OPEN FLOW) (DELIVERABILITY) CALCULATIONS

(P_a)² = 0.207
(P_d)² = _____

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

(P _c) ² - (P _a) ² or (P _c) ² - (P _d) ²	(P _c) ² - (P _w) ²	Choose formula 1 or 2: 1. P _c ² - P _a ² 2. P _c ² - P _d ² divided by: P _c ² - P _w ²	LOG of formula 1. or 2. and divide by: $\left[\frac{P_c^2 - P_w^2}{P_c^2 - P_a^2} \right]$	Backpressure Curve Slope = "n" ----- or ----- Assigned Standard Slope	n x LOG $\left[\frac{P_c^2 - P_w^2}{P_c^2 - P_a^2} \right]$	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

Samuel Martney
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 13-19 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: 12/12/14

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CONSERVATION DIVISION
WICHITA, KS

Signature: Jarrell Montney
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.

W2731

Zweygart 13-19

St. Francis

St. Francis

Flow

June-1~~8~~4

FloBoss

DATE	Casing PSI	STATIC	MCF	HRS DOWN	REMARKS (Maximum length 110 characters)
6/1/2013	66	79		11	0
6/2/2013	71	84		11	0
6/3/2013	64	77		11	0
6/4/2013	80	93		11	0
6/5/2013	62	75		11	0
6/6/2013	63	76		11	0
6/7/2013	176	189		6	9
6/8/2013	189	202		0	24
6/9/2013	201	214		0	24
6/10/2013	213	226		0	24
6/11/2013	222	235		0	24
6/12/2013	227	240		0	24
6/13/2013	229	242		0	24
6/14/2013	230	243		0	24
6/15/2013	230	243		0	24
6/16/2013	231	244		0	24
6/17/2013	231	244		0	24
6/18/2013	231	244		0	24
6/19/2013	226	239		0	24
6/20/2013	223	236		0	24
6/21/2013	222	235		0	24
6/22/2013	222	235		0	24
6/23/2013	141	154		15	5
6/24/2013	121	134		18	0
6/25/2013	114	127		14	0
6/26/2013	102	115		14	0
6/27/2013	96	109		14	0
6/28/2013	75	88		13	0
6/29/2013	67	80		13	0
6/30/2013	68	81		12	0
7/1/2013					0

Total

185

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CONSERVATION DIVISION
WICHITA, KS

W2731
 Zweygardt 13-19
 St. Francis
 St. Francis
 Flow
 July-14
 FloBoss

DATE	Casing PSI	STATIC	MCF	HRS DOWN	REMARKS (Maximum length 110 characters)
7/1/2014	68	81		12	0
7/2/2014	67	80		12	0
7/3/2014	68	81		11	0
7/4/2014	68	81		11	0
7/5/2014	68	81		11	0
7/6/2014	68	81		11	0
7/7/2014	77	90		11	0
7/8/2014	68	81		11	0
7/9/2014	69	82		11	0
7/10/2014	70	83		11	0
7/11/2014	73	86		11	0
7/12/2014	71	84		11	0
7/13/2014	72	85		10	0
7/14/2014	73	86		10	0
7/15/2014	64	77		11	0
7/16/2014	66	79		11	0
7/17/2014	66	79		11	0
7/18/2014	67	80		11	0
7/19/2014	64	77		11	0
7/20/2014	65	78		11	0
7/21/2014	144	157		11	0
7/22/2014	146	159		3	22
7/23/2014	90	103		13	7
7/24/2014	61	74		11	3
7/25/2014	64	77		11	4
7/26/2014	62	75		11	0
7/27/2014	63	76		10	0
7/28/2014	63	76		10	0
7/29/2014	64	77		10	0
7/30/2014	64	77		10	0
7/31/2014	69	82		10	0

Total

330

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 WICHITA, KS

W2731
 Zweygartd 13-19
 St. Francis
 St. Francis
 Flow
 August-14
 FloBoss

DATE	Casing PSI	STATIC	MCF	HRS DOWN	REMARKS (Maximum length 110 characters)
8/1/2014	64	77		10	0
8/2/2014	63	76		10	0
8/3/2014	63	76		10	0
8/4/2014	63	76		10	0
8/5/2014	64	77		10	0
8/6/2014	65	78		10	0
8/7/2014	65	78		9	0
8/8/2014	66	79		9	0
8/9/2014	67	80		9	0
8/10/2014	68	81		9	0
8/11/2014	75	88		9	0
8/12/2014	63	76		9	0
8/13/2014	64	77		9	0
8/14/2014	63	76		9	0
8/15/2014	69	83		9	3
8/16/2014	67	80		9	0
8/17/2014	69	82		9	0
8/18/2014	67	80		9	0
8/19/2014	74	87		9	2
8/20/2014	66	79		9	0
8/21/2014	65	78		9	0
8/22/2014	78	91		9	0
8/23/2014	62	75		9	0
8/24/2014	64	77		9	0
8/25/2014	82	95		9	0
8/26/2014	64	77		9	0
8/27/2014	75	88		9	0
8/28/2014	96	109		9	0
8/29/2014	62	75		9	5
8/30/2014	61	74		9	0
8/31/2014	72	85		9	0

Total

285

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 WICHITA, KS