

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

Type Test:

- Open Flow **ASL**  
 Deliverability

(See Instructions on Reverse Side)

Test Date:  
5/8/2013

API No. 15  
15-023-20-111-0000

Company Rosewood Resources, Inc.		Lease R. Walter		Well Number #5	
County Cheyenne	Location NESW	Section 9	TWP 3S	RNG (E/W) 41W	Acres Attributed 80
Field Cherry Creek		Reservoir Niobrara		Gas Gathering Connection Branch Systems Inc.	
Completion Date 7/18/1980		Plug Back Total Depth 1505'		Packer Set at	
Casing Size 4 1/2"	Weight 10.5#	Internal Diameter 4.052	Set at 1470'	Perforations 1454'	To 1468'
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	
Vertical Depth(H) 1402'		Pressure Taps Flange		Gas Gravity - G <sub>g</sub> .6 (Meter Run) (Prover) Size 2"	
Pressure Buildup: Shut in 5-7		20 13 at 10:30		(AM)(PM) Taken 5-8	
Well on Line: Started 5-8		20 13 at 10:45		(AM)(PM) Taken 5-9	
				20 13 at 10:45 (AM)(PM)	
				20 13 at 11:30 (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>t</sub> ) or (P <sub>c</sub> )		Tubing Wellhead Pressure (P <sub>w</sub> ) or (P <sub>t</sub> ) or (P <sub>c</sub> )		Duration (Hours)	Liquid Produced (Barrels)
						psig	psia	psig	psia		
Shut-In						89	103.4				
Flow						56	70.4			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>
						18		

### (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>d</sub>)<sup>2</sup> = 0.207  
(P<sub>o</sub>)<sup>2</sup> = \_\_\_\_\_

(P <sub>c</sub> ) <sup>2</sup> - (P <sub>d</sub> ) <sup>2</sup> or (P <sub>o</sub> ) <sup>2</sup> - (P <sub>d</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>d</sub> <sup>2</sup> 2. P <sub>o</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: $\frac{P_c^2 - P_w^2}{P_c^2 - P_d^2}$	Backpressure Curve Slope = "n" ----- or ----- Assigned Standard Slope	n x LOG [ ]	Antilog	Open Flow Deliverability Equals R x Antilog (Mcf/d)

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 November, 20 13.

Witness (if any)

For Commission

For Company

Checked by

*Januel Martiny*  
For Company

**KCC WICHITA**

DEC 26 2013

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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 R. Walter 32-21 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

Signature: *Janell Martiney*  
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.

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W377  
 Walter #5  
 St. Francis  
 St. Francis  
 Pumping Unit/Elec  
 May-13

DATE	Tubing PSI	Casing PSI	STATIC	MCF	SPM	CYCLE	HRS DOWN	Water BBLs	REMARKS (Maximum length 110 characters)
5/1/2013		45	58		18	6.5	4	8	
5/2/2013		51	64		18	6.5	4	9	
5/3/2013		39	52		18	6.5	4	9	
5/4/2013		34	47		18	6.5	4	8	
5/5/2013		35	48		18	6.5	4	7	
5/6/2013		36	49		18	6.5	4	10	3 min bt
5/7/2013		35	48		18	6.5	2	5	si for state test - cp 44
5/8/2013		42	55	0	6.5	2	24	5	reopened - cp 89
5/9/2013		47	60	21	6.5	4		7	
5/10/2013		48	61	20	6.5	4		6	
5/11/2013		48	61	19	6.5	4		8	
5/12/2013		47	60	19	6.5	4		10	
5/13/2013		48	61	19	6.5	4		12	
5/14/2013		54	67	19	6.5	4		11	
5/15/2013		85	98	17	6.5	2	2.5	5	pu off high fp
5/16/2013		63	76	14	6.5	2		5	restarted pu
5/17/2013		44	57	20	6.5	4		10	treated well
5/18/2013		45	58	17	6.5	4		11	
5/19/2013		56	69	17	6.5	4		12	
5/20/2013		51	64	17	6.5	4		12	
5/21/2013		34	47	18	6.5	4		13	
5/22/2013		43	56	18	6.5	2	14	7	pu off high fp
5/23/2013		90	103	5	6.5	0	10	0	
5/24/2013		93	106	0	6.5	0	4	0	
5/25/2013		89	102	0	6.5	0		0	
5/26/2013		81	94	10	6.5	0		0	
5/27/2013		78	91	14	6.5	0		0	
5/28/2013		67	80	22	6.5	0		0	
5/29/2013		55	68	23	6.5	0		0	
5/30/2013		41	54	18	6.5	2		7	restarted pu
5/31/2013		35	48	18	6.5	4		14	

Total

491

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W377  
 Walter #5  
 St. Francis  
 St. Francis  
 Pumping Unit/Elec  
 June-13

DATE	Casing PSI	STATIC	MCF	SPM	HRS CYCLE DOWN	Water BBL	REMARKS (Maximum length 110 characters)
6/1/2013	31	44	18	6.5	4	10	
6/2/2013	38	51	18	6.5	4	11	
6/3/2013	33	46	18	6.5	4	12	
6/4/2013	32	45	18	6.5	4	4	6 min bt
6/5/2013	49	62	18	6.5	4	5	
6/6/2013	57	70	18	6.5	4	6	
6/7/2013	36	49	19	6.5	4	4	calibrate meter
6/8/2013	37	50	18	6.5	4	7	
6/9/2013	38	51	18	6.5	4	3	
6/10/2013	37	50	18	6.5	4	2	4
6/11/2013	63	76	16	6.5	2	1	4 pu off hfp
6/12/2013	64	77	16	6.5	0		0
6/13/2013	42	55	20	6.5	2		4 restart pu
6/14/2013	46	59	17	6.5	4		4
6/15/2013	46	59	17	6.5	4		3
6/16/2013	48	61	17	6.5	4		4
6/17/2013	56	69	18	6.5	2		2 pu off
6/18/2013	35	48	18	6.5	0		0
6/19/2013	30	43	18	6.5	2		2 restart pu
6/20/2013	35	48	18	6.5	4		4
6/21/2013	42	55	17	6.5	4		5
6/22/2013	59	72	17	6.5	4		7
6/23/2013	71	84	11	6.5	2		2 pu off hfp
6/24/2013	67	80	13	6.5	0		0
6/25/2013	70	83	12	6.5	0		0
6/26/2013	70	83	12	6.5	0		0
6/27/2013	55	68	15	6.5	4		2 pu on
6/28/2013	49	52	18	6.5	4		4
6/29/2013	38	51	17	6.5	4		3
6/30/2013	37	50	17	6.5	4		2
7/1/2013							

Total

505

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W377  
 Walter #5  
 St. Francis  
 St. Francis  
 Pumping Unit/Elec  
 July-13

DATE	Casing PSI	STATIC MCF	SPM	HRS CYCLE DOWN	Water BBLs	REMARKS (Maximum length 110 characters)
7/1/2013	39	52	16	6.5	4	4
7/2/2013	39	52	16	6.5	4	3
7/3/2013	42	54	15	6.5	4	4
7/4/2013	43	56	16	6.5	4	5
7/5/2013	43	56	16	6.5	4	3
7/6/2013	42	55	16	6.5	4	4
7/7/2013	55	68	16	6.5	4	5
7/8/2013	55	68	16	6.5	4	8 3.75 min bt
7/9/2013	55	68	16	6.5	4	6
7/10/2013	47	60	17	6.5	4	7
7/11/2013	53	66	17	6.5	4	4
7/12/2013	62	75	15	6.5	2	2.5 2 shut pumping unit off hfp
7/13/2013	60	73	15	6.5	2	4 restarted pumping unit
7/14/2013	66	79	16	6.5	4	8
7/15/2013	43	56	18	6.5	4	8
7/16/2013	42	55	17	6.5	4	7
7/17/2013	37	50	17	6.5	4	5
7/18/2013	65	78	17	6.5	2	2 pu off hfp
7/19/2013	61	74	15	6.5	0	0 treated well
7/20/2013	63	76	15	6.5	0	0
7/21/2013	62	75	16	6.5	0	0
7/22/2013	62	76	16	6.5	0	0
7/23/2013	54	67	16	6.5	2	2 restarted pumping unit
7/24/2013	61	74	16	6.5	4	7 4 min bt
7/25/2013	68	81	14	6.5	2	2 pu off hfp
7/26/2013	47	60	15	6.5	2	4 restarted pu, didn't wait for it to bring
7/27/2013	39	52	16	6.5	4	8
7/28/2013	41	54	16	6.5	4	7
7/29/2013	39	52	16	6.5	4	7
7/30/2013	38	51	16	6.5	2	3.5 6 pu off hfp
7/31/2013	82	95	8	6.5	0	5.5 0

Total

487

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