

KANSAS CORPORATION COMMISSION ONE POINT STABILIZED OPEN FLOW OR DELIVERABILITY TEST

Type Test:

- Open Flow **AST**
 Deliverability

(See Instructions on Reverse Side)

Test Date:
7/17/2013

API No. 15
023-20613-0000

Company Rosewood Resources, Inc.		Lease Willard		Well Number 1-26	
County Cheyenne	Location NW NE/4	Section 26	TWP 3S	RNG (E/W) 41W	Acres Attributed 80
Field Cherry Creek		Reservoir Niobrara		Gas Gathering Connection Branch Systems Inc.	
Completion Date 5/27/2005		Plug Back Total Depth 1506'		Packer Set at	
Casing Size 4 1/2"	Weight 10.5#	Internal Diameter 4.052	Set at 1506'	Perforations 1294'	To 1328'
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 / No Pumping Unit	
Producing Thru (Annulus / Tubing) Annulus		% Carbon Dioxide		% Nitrogen	
Vertical Depth(H) 1328'		Pressure Taps Flange		(Meter Run) (Prover) Size 2"	
Pressure Buildup: Shut in 7-16 20 13 at 8:20 (AM) (PM) Taken 7-17 20 13 at 8:35 (AM) (PM)		Well on Line: Started 7-17 20 13 at 8:35 (AM) (PM) Taken 7-18 20 13 at 9:20 (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 ₂ O	Flowing Temperature t	Well Head Temperature t	Casing Wellhead Pressure (P _w) or (P _t) or (P _c)		Tubing Wellhead Pressure (P _w) or (P _t) or (P _c)		Duration (Hours)	Liquid Produced (Barrels)
						psig	psia	psig	psia		
Shut-In						129	143.4				
Flow						64	78.4			24	

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 _{tt}	Deviation Factor F _{pv}	Metered Flow R (Mcfd)	GOR (Cubic Feet/ Barrel)	Flowing Fluid Gravity G _m
						39		

(OPEN FLOW) (DELIVERABILITY) CALCULATIONS

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

(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: $\frac{P_c^2 - P_w^2}{P_c^2 - P_a^2}$	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 November, 20 13.

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Januel Montroy
For Company

Witness (if any)

DEC 26 2013

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 Willard 1-26 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: Jannell Matney
Title: Production Assistant
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CONSERVATION DIVISION
WICHITA, KS

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.

W378
 Willard 01-26
 St. Francis
 St. Francis
 None
 July-13

DATE	Casing PSI	STATIC	MCF	SPM	HRS CYCLE DOWN	Water BBLs	REMARKS (Maximum length 110 characters)
7/1/2013	52	65	39	5.5	8	10	
7/2/2013	52	65	40	5.5	8	13	4.25 min bt
7/3/2013	54	67	40	5.5	8	12	
7/4/2013	54	67	40	5.5	8	14	
7/5/2013	54	67	40	5.5	8	11	
7/6/2013	56	69	40	5.5	8	13	
7/7/2013	67	80	40	5.5	8	12	
7/8/2013	66	79	40	5.5	8	14	
7/9/2013	66	79	41	5.5	8	12	
7/10/2013	53	69	41	5.5	8	11	
7/11/2013	58	71	41	5.5	8	14	
7/12/2013	64	77	41	5.5	4	6	
7/13/2013	74	87	38	5.5	0	2.5	0 treated well
7/14/2013	76	89	37	5.5	0	0	
7/15/2013	55	68	37	5.5	4	7	started pu
7/16/2013	55	68	38	5.5	4	7	si for state test - cp 55
7/17/2013	129	66	3	5.5	4	24	7 reopened - cp 129
7/18/2013	77	90	45	5.5	4	7	pu off hfp
7/19/2013	70	83	44	5.5	0	0	
7/20/2013	72	85	41	5.5	0	0	
7/21/2013	75	88	39	5.5	0	0	
7/22/2013	71	84	38	5.5	0	0	
7/23/2013	63	76	37	5.5	4	7	restart pu
7/24/2013	71	84	39	5.5	8	13	4.5 min bt
7/25/2013	77	90	40	5.5	4	7	pu off hfp
7/26/2013	60	73	38	5.5	4	7	restart pu, didn't wait for water
7/27/2013	54	67	39	5.5	8	13	
7/28/2013	56	69	40	5.5	8	14	
7/29/2013	54	67	41	5.5	8	13	
7/30/2013	54	67	41	5.5	4	3.5	7 pu off hfp
7/31/2013	84	97	30	5.5	0	5.5	0

Total

1188

251

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W378
 Willard 01-26
 St. Francis
 St. Francis
 None
 August-13

DATE	Casing			HRS CYCLE DOWN	Water BBLs	REMARKS (Maximum length 110 characters)
	PSI	STATIC MCF	SPM			
8/1/2013	77	90	39	5.5		
8/2/2013	77	90	36	5.5		
8/3/2013	74	87	34	5.5		
8/4/2013	72	85	34	5.5		
8/5/2013	66	79	33	5.5		
8/6/2013	53	66	33	5.5	2	6 restart pu
8/7/2013	49	62	35	5.5	4	13
8/8/2013	53	66	37	5.5	4	12
8/9/2013	57	70	37	5.5	4	12
8/10/2013	53	66	37	5.5	4	13
8/11/2013	51	64	38	5.5	4	14
8/12/2013	52	65	38	5.5	4	13
8/13/2013	51	64	39	5.5	4	7 4 min bt greased
8/14/2013	52	65	39	5.5	4	9
8/15/2013	52	65	39	5.5	4	0.5 6
8/16/2013	64	77	39	5.5	4	8
8/17/2013	63	76	39	5.5	4	9
8/18/2013	64	77	39	5.5	4	10
8/19/2013	64	77	40	5.5	2	1.5 5
8/20/2013	76	89	37	5.5	0	1 0
8/21/2013	85	98	35	5.5	0	0
8/22/2013	88	101	35	5.5	0	5 0
8/23/2013	72	85	36	5.5	0	0
8/24/2013	81	94	35	5.5	0	1 0
8/25/2013	86	99	33	5.5	0	1 0
8/26/2013	54	67	33	5.5	2	4 started pumping unit
8/27/2013	49	62	35	5.5	4	7
8/28/2013	49	62	36	5.5	4	8
8/29/2013	77	90	37	5.5	2	1 4 pu off hfp
8/30/2013	84	97	34	5.5	0	0
8/31/2013	85	98	33	5.5	0	0

Total

1124

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W378
 Willard 01-26
 St. Francis
 St. Francis
 None
 September-13

DATE	Casing PSI	STATIC MCF	SPM	HRS CYCLEDOWN	Water BBLs	REMARKS (Maximum length 110 characters)
9/1/2013	105	118	29		1	
9/2/2013	105	118	29			
9/3/2013	121	134	35		22	
9/4/2013	133	146	3		10	
9/5/2013	110	123	18			
9/6/2013	86	99	44		1	
9/7/2013	92	105	36			
9/8/2013	90	103	36			
9/9/2013	99	112	34			
9/10/2013	102	115	32		2	
9/11/2013	124	137	32			
9/12/2013	154	167	16		18	
9/13/2013	105	118	26		4	
9/14/2013	78	91	38		2	
9/15/2013	85	98	36			
9/16/2013	62	75	33			
9/17/2013	52	65	32			
9/18/2013	52	65	32	5.5	4	4 restart pu
9/19/2013	45	58	34	5.5	8	7
9/20/2013	46	59	35	5.5	8	8
9/21/2013	61	74	35	5.5	8	6
9/22/2013	69	82	35	5.5	8	7
9/23/2013	60	73	36	5.5	8	8
9/24/2013	53	66	37	5.5	4	4 pu off hfp
9/25/2013	85	98	33	5.5	0	0
9/26/2013	72	85	34	5.5	0	0
9/27/2013	50	63	33	5.5	4	4 restart pu treated well
9/28/2013	53	66	33	5.5	8	8
9/29/2013	54	67	35	5.5	8	7
9/30/2013	58	71	35	5.5	8	8
10/1/2013						

Total

956

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