

KANSAS CORPORATION COMMISSION ONE POINT STABILIZED OPEN FLOW OR DELIVERABILITY TEST

Type Test:

- Open Flow **ASD**
 Deliverability

(See Instructions on Reverse Side)

Test Date:
6/22/14

API No. 15
023-20666-0000

Company Rosewood Resources, Inc.			Lease Heim		Well Number 31-33
County Cheyenne	Location NWNE	Section 33	TWP 2S	RNG (E/W) 42W	Acres Attributed 80
Field Cherry Creek		Reservoir Niobrara	Gas Gathering Connection Branch Systems Inc.		
Completion Date 3/29/2006		Plug Back Total Depth 1799'	Packer Set at		
Casing Size 4 1/2"	Weight 10.5#	Internal Diameter 4.052	Set at 1799.86'	Perforations 1616'	To 1648'
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"/> No Pumping Unit		
Producing Thru (Annulus / Tubing) Annulus		% Carbon Dioxide	% Nitrogen	Gas Gravity - G _g .6	
Vertical Depth(H) 1614'		Pressure Taps Flange		(Meter Run) (Prover) Size 2"	
Pressure Buildup: Shut in 6-7		20 14	at 1:55	(AM) (PM) Taken 6-19	20 14
Well on Line: Started 6-22		20 14	at 2:10	(AM) (PM) Taken 6-23	20 14
					at 2:55 (AM) (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 ₂ O	Flowing Temperature t	Well Head Temperature t	Casing Wellhead Pressure (P _w) or (P ₁) or (P ₂)		Tubing Wellhead Pressure (P _w) or (P ₁) or (P ₂)		Duration (Hours)	Liquid Produced (Barrels)
						psig	psia	psig	psia		
Shut-In						142	156.4				
Flow						53	67.4			360	

FLOW STREAM ATTRIBUTES

Plate Coefficient (F _p) (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 (Mcf/d)	GOR (Cubic Feet/ Barrel)	Flowing Fluid Gravity G _m
						37		

(OPEN FLOW) (DELIVERABILITY) CALCULATIONS

(P_o)² = _____ : (P_w)² = _____ : P_g = _____ % (P_o - 14.4) + 14.4 = _____ : (P_o)² = 0.207
(P_g)² = _____

(P _o) ² - (P _a) ² or (P _o) ² - (P _w) ²	(P _o) ² - (P _w) ²	Choose formula 1 or 2: 1. P _c ² - P _a ² 2. P _c ² - P _w ² divided by: P _c ² - P _w ²	LOG of formula 1, or 2, and divide by: $\frac{P_c^2 - P_w^2}{P_c^2 - P_w^2}$	Backpressure Curve Slope = "n" ----- or ----- Assigned Standard Slope	n x LOG []	Antilog	Open Flow Deliverability Equals R x Antilog (Mcf/d)

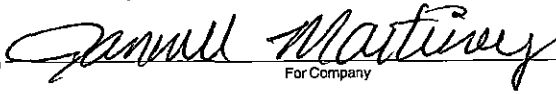
Open Flow

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 the 10 day of December, 20 14.

Received 
KANSAS CORPORATION COMMISSION For Company

Witness (if any) _____
For Commission _____

FEB 25 2015

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 Heim 31-33 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: 12/10/14

Received
KANSAS CORPORATION COMMISSION
FEB 25 2015
CONSERVATION DIVISION
WICHITA, KS

Signature: Jannell Maitney
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.

W436
 Heim 31-33
 West St. Francis
 St. Francis
 None
 June-14

DATE	Casing			SPM	HRS		Water BBLs	REMARKS (Maximum length 110 characters)
	PSI	STATIC	MCF		CYCLE	DOWN		
6/1/2014	57	70	52	6	24	0	41	
6/2/2014	70	83	52	6	24	0	42	
6/3/2014	64	77	52	6	24	0	41	
6/4/2014	84	97	41	6	24	0	40	
6/5/2014	48	61	43	6	24	0	41	
6/6/2014	51	64	39	6	12	0	20	shut pumping unit off hfp
6/7/2014	132	145	25			9		
6/8/2014	123	136	0			24		
6/9/2014	130	143	0			24		
6/10/2014	130	143	0			24		
6/11/2014	132	145	0			24		
6/12/2014	132	145	0			24		
6/13/2014	134	147	0			24		
6/14/2014	136	149	0			24		
6/15/2014	136	149	0			24		
6/16/2014	139	152	0			24		
6/17/2014	139	152	0			24		
6/18/2014	141	154	0			24		
6/19/2014	142	155	0			24		
6/20/2014	142	155	0			24		
6/21/2014	142	155	0			24		
6/22/2014	142	155	0			24		
6/23/2014	118	131	32			5		
6/24/2014	113	126	32			0		
6/25/2014	100	113	40			0		
6/26/2014	92	105	62			0		
6/27/2014	87	100	49			0		
6/28/2014	54	67	45	6	12	0	0	started pumping unit
6/29/2014	53	66	42	6	12	0	21	
6/30/2014	51	64	41	6	12	0	20	
7/1/2014						0		

Total

647

266

Received
 KANSAS CORPORATION COMMISSION

FEB 25 2015

CONSERVATION DIVISION
 WICHITA, KS

W436
 Heim 31-33
 West St. Francis
 St. Francis
 None
 July-14

DATE	Casing PSI	STATIC	MCF	SPM	HRS CYCLE	DOWN	Water BBLs
7/1/2014	54	67	39				0
7/2/2014	53	66	37				0
7/3/2014	53	66	37				0
7/4/2014	53	66	37				0
7/5/2014	67	70	35				0
7/6/2014	67	70	35				0
7/7/2014	68	81	33				0
7/8/2014	58	71	32				0
7/9/2014	58	71	32				0
7/10/2014	59	72	32				0
7/11/2014	60	73	31				0
7/12/2014	60	73	31				0
7/13/2014	61	74	32				0
7/14/2014	72	85	30	6	12	0	21
7/15/2014	50	63	30	6	12	0	20
7/16/2014	50	63	31	6	6	0	9
7/17/2014	51	64	30	6	6	0	10
7/18/2014	51	64	30	6	6	0	10
7/19/2014	49	62	29	6	6	0	10
7/20/2014	49	62	29	6	6	0	10
7/21/2014	114	127	29	6	3	0	5
7/22/2014	129	142	5	6	0	22	0
7/23/2014	82	95	29	6	0	7	0
7/24/2014	58	71	33	6	0	3	0
7/25/2014	48	61	29	6	6	4	0
7/26/2014	50	63	30	6	12	0	0
7/27/2014	51	64	37	6	24	0	42
7/28/2014	43	56	42	6	24	0	41
7/29/2014	41	54	42	6	24	0	40
7/30/2014	38	51	39	6	16	0	25
7/31/2014	42	55	39	6	24	0	40

Total

1006

283

Received
 KANSAS CORPORATION COMMISSION

FEB 25 2015

CONSERVATION DIVISION
 WICHITA, KS

W436
 Heim 31-33
 West St. Francis
 St. Francis
 None
 August-14

DATE	Tubing PSI	Casing PSI	STATIC	MCF	SPM	HRS CYCLE	DOWN	Water BBLs
8/1/2014		40	53	40	6	24	0	38
8/2/2014		40	53	40	6	24	0	39
8/3/2014		39	52	40	6	24	0	40
8/4/2014		53	66	39	6	24	0	39
8/5/2014		53	66	38	6	24	0	38
8/6/2014		53	66	38	6	24	0	39
8/7/2014		55	68	39	6	24	0	40
8/8/2014		56	69	40	6	24	0	39
8/9/2014		56	69	40	6	24	0	39
8/10/2014		57	70	39	6	12	0	19
8/11/2014		55	68	33	6	12	0	20
8/12/2014		53	66	34	6	12	0	21
8/13/2014		38	51	35	6	12	0	22
8/14/2014		38	51	35	6	12	0	21
8/15/2014		43	56	32	6	12	3	18
8/16/2014		36	49	30	6	12	0	18
8/17/2014		36	49	30	6	12	0	18
8/18/2014		37	50	32	6	12	0	19
8/19/2014		49	62	32	6	12	2	18
8/20/2014		44	57	32	6	12	0	17
8/21/2014		39	52	33	6	12	0	16
8/22/2014		55	68	35	6	12	0	17
8/23/2014		50	63	35	6	12	0	18
8/24/2014		52	65	35	6	12	0	19
8/25/2014		64	77	36	6	12	0	21
8/26/2014		54	67	36	6	12	0	38
8/27/2014		57	70	36	6	12	0	37
8/28/2014		51	64	37	6	6	0	18
8/29/2014		50	63	32	6	6	5	18
8/30/2014		50	63	32	6	12	0	18
8/31/2014		63	76	38	6	12	0	19

Total

1103

801

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 KANSAS CORPORATION COMMISSION

FEB 25 2015

CONSERVATION DIVISION
 WICHITA, KS