

KANSAS CORPORATION COMMISSION ONE POINT STABILIZED OPEN FLOW OR DELIVERABILITY TEST

Type Test:

- Open Flow **AST**
 Deliverability

(See Instructions on Reverse Side)

Test Date:
7/9/2015

API No. 15
023-20627-0000

Company Rosewood Resources, Inc.		Lease Isernhagen			Well Number 21-26
County Cheyenne	Location NENW/4	Section 26	TWP 3S	RNG (E/W) 41W	Acres Attributed 80
Field St. Francis		Reservoir Niobrara		Gas Gathering Connection Branch Systems Inc.	
Completion Date 10/22/2005		Plug Back Total Depth 1513'		Packer Set at	
Casing Size 2 7/8"	Weight 6.5#	Internal Diameter 2.441	Set at 1513'	Perforations 1381'	To 1413'
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	Gas Gravity - G _g .6
Vertical Depth(H) 1413'		Pressure Taps Flange		(Meter Run) (Prover) Size 2"	
Pressure Buildup: Shut in		7-9	20 15 at 11:20	<input checked="" type="checkbox"/> (AM) (PM) Taken	7-10 20 15 at 11:30 <input checked="" type="checkbox"/> (AM) (PM)
Well on Line: Started		7-10	20 15 at 11:30	<input checked="" type="checkbox"/> (AM) (PM) Taken	7-11 20 15 at 1:20 <input checked="" type="checkbox"/> (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 _i) or (P _c)		Tubing Wellhead Pressure (P _w) or (P _i) or (P _c)		Duration (Hours)	Liquid Produced (Barrels)
						psig	psia	psig	psia		
Shut-in						173	187.4				
Flow						55	69.4			24	0

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 (Mcfd)	GOR (Cubic Feet/ Barrel)	Flowing Fluid Gravity G _m
						10		

(OPEN FLOW) (DELIVERABILITY) CALCULATIONS

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

(P _c) ² - (P _a) ² or (P _c) ² - (P _d) ²	(P _o) ² - (P _w) ²	Choose formula 1 or 2: 1. P _o ² - P _a ² 2. P _o ² - P _d ² divided by: P _c ² - P _w ²	LOG of formula 1, or 2, and divide by: $\frac{P_c^2 - P_w^2}{P_o^2 - P_a^2}$	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 18 day of December, 20 15.

KCC WICHITA

James M. Martin
For Company

Witness (if any)

APR 07 2016

For Commission

Checked by

RECEIVED

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 Isernhagen 21-26 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: 12/18/15

KCC WICHITA Signature: *Samuel Marteny*
APR 07 2016 Title: Production Assistant
RECEIVED

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.

W360

Isernhagen 21-26

St. Francis

St. Francis

None

July-15

DATE	Casing PSI	STATIC	MCF	HRS DOWN	REMARKS (Maximum length 110 characters)
7/1/2015	73	68		11	0
7/2/2015	73	67		11	0
7/3/2015	73	67		11	0
7/4/2015	73	67		10	0
7/5/2015	73	67		11	0
7/6/2015	52	67		9	2
7/7/2015	52	66		0	0
7/8/2015	52	66		11	16
7/9/2015	90	96		11	24
7/10/2015	173	157		11	14
7/11/2015	98	121		10	0
7/12/2015	76	95		11	0
7/13/2015	68	85		11	0
7/14/2015	68	69		11	0
7/15/2015	68	66		10	0
7/16/2015	68	66		11	0
7/17/2015	68	66		19	0
7/18/2015	68	65		13	0
7/19/2015	68	65		11	0
7/20/2015	68	65		11	0
7/21/2015	72	77		11	2 drained water off seperator, bp
7/22/2015	50	65		10	0 drained water off seperator, bp
7/23/2015	50	65		11	0
7/24/2015	72	65		11	0 drained water off seperator, bp
7/25/2015	68	64		10	0
7/26/2015	70	64		10	0
7/27/2015	64	64		10	0 drained water off seperator, bp
7/28/2015	64	64		10	0
7/29/2015	64	63		11	0
7/30/2015	64	63		11	0
7/31/2015	64	77		11	0

Total

330

KCC WICHITA

APR 07 2016

RECEIVED

W360

Isernhagen 21-26

St. Francis

St. Francis

None

August-15

DATE	Casing		MCF	HRS		REMARKS (Maximum length 110 characters)
	PSI	STATIC		DOWN		
8/1/2015	60	73		10	0	
8/2/2015	55	68		11	0	
8/3/2015	55	68		10	0	
8/4/2015	55	68		10	0	
8/5/2015	55	68		10	0	
8/6/2015	55	68		10	0	43#?
8/7/2015	55	68		10	0	
8/8/2015	55	68		10	0	
8/9/2015	55	68		10	0	
8/10/2015	57	70		5	0	
8/11/2015	57	70		10	0	
8/12/2015	58	71		11	0	
8/13/2015	58	71		10	0	
8/14/2015	58	71		10	0	
8/15/2015	58	71		10	0	
8/16/2015	59	72		10	0	
8/17/2015	58	71		10	0	
8/18/2015	58	71		10	0	
8/19/2015	50	72		10	0	
8/20/2015	58	71		5	0	cracked water valve at seperator
8/21/2015	58	71		3	0	closed water valve, leaking gas into water
8/22/2015	59	72		9	0	
8/23/2015	59	72		10	0	
8/24/2015	58	71		10	0	
8/25/2015	59	72		10	0	
8/26/2015	58	71		10	0	
8/27/2015	57	70		11	0	
8/28/2015	56	69		11	0	
8/29/2015	59	72		10	0	
8/30/2015	61	74		10	4	
8/31/2015	63	76		10	0	

Total

296

KCC WICHITA

APR 07 2016

RECEIVED

W360

Isernhagen 21-26

St. Francis

St. Francis

None

September-15

DATE	Casing		MCF	HRS		REMARKS (Maximum length 110 characters)
	PSI	STATIC		DOWN		
9/1/2015	77	90		9	0	
9/2/2015	54	67		11	0	
9/3/2015	55	68		10	0	
9/4/2015	58	71		10	0	
9/5/2015	63	76		10	0	
9/6/2015	66	79		9	0	
9/7/2015	65	78		9	0	
9/8/2015	64	77		9	0	
9/9/2015	66	79		10	0	
9/10/2015	55	68		10	0	
9/11/2015	59	72		9	0	
9/12/2015	60	73		9	0	
9/13/2015	59	72		9	0	
9/14/2015	60	73		9	0	
9/15/2015	61	74		9	0	
9/16/2015	63	76		9	0	
9/17/2015	63	76		9	0	
9/18/2015	63	76		9	0	
9/19/2015	50	73		9	0	
9/20/2015	58	71		9	0	
9/21/2015	59	72		9	0	
9/22/2015	60	73		9	0	
9/23/2015	62	75		9	0	
9/24/2015	62	75		9	0	
9/25/2015	62	75		9	0	
9/26/2015	62	75		9	0	
9/27/2015	62	75		9	0	
9/28/2015	62	75		9	0	
9/29/2015	62	75		9	0	
9/30/2015	62	75		9	0	
10/1/2015	0	0		0	0	

Total

277

KCC WICHITA

APR 07 2016

RECEIVED