

KANSAS CORPORATION COMMISSION ONE POINT STABILIZED OPEN FLOW OR DELIVERABILITY TEST

Type Test:

- Open Flow
 Deliverability

(See Instructions on Reverse Side)

Test Date:
9/27/2011

API No. 15
15-199-20363 - 0000

Company Raven Resources, LLC		Lease Westfield		Well Number #1-1	
County Wallace County	Location NW/4 NW/4	Section 01	TWP 12S	RNG (E/W) 42W	Acres Attributed
Field		Reservoir Niobrara	Gas Gathering Connection Closed gathering system (West Kansas Pipeline)		
Completion Date 8/2008		Plug Back Total Depth 991.34'	Packer Set at		
Casing Size 4 1/2"	Weight 10.5	Internal Diameter	Set at 1033.34'	Perforations 830' - 863'	To
Tubing Size 2 3/8"	Weight 4.7	Internal Diameter	Set at 825'	Perforations	To
Type Completion (Describe) CO2 Frac "Single Gas"		Type Fluid Production Only Gas	Pump Unit or Traveling Plunger? No		Yes <input checked="" type="checkbox"/> No
Producing Thru (Annulus / Tubing)		% Carbon Dioxide	% Nitrogen	Gas Gravity - G _g	
Tubing					
Vertical Depth(H) 1040'		Pressure Taps		(Meter Run) (Prover) Size .500"	
Pressure Buildup:	Shut in 9/26	20 11	at 9 am	(AM) (PM) Taken 9/27	20 11 at 9 am (AM) (PM)
Well on Line:	Started 9/27	20 11	at 9 am	(AM) (PM) Taken 9/28	20 11 at 9 am (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 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	.500	16	0			8		8		24	0
Flow	.500	16.4	3			5		5		24	0

FLOW STREAM ATTRIBUTES

Plate Coefficient (F _v) (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
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							NOV 14 2011	

(OPEN FLOW) (DELIVERABILITY) CALCULATIONS

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

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(P _o) ² - (P _s) ² or (P _o) ² - (P _w) ²	(P _o) ² - (P _w) ²	Choose formula 1 or 2: 1. P _o ² - P _s ² 2. P _o ² - P _w ² divided by: P _o ² - P _w ²	LOG of formula 1. or 2. and divide by: $\left[\frac{P_o^2 - P_w^2}{P_o^2 - P_w^2} \right]$	Backpressure Curve Slope = "n" ----- or ----- Assigned Standard Slope	n x LOG $\left[\frac{P_o^2 - P_w^2}{P_o^2 - P_w^2} \right]$	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 10th day of Nov, 2011.

For Company
 For Commission
 Witness (if any) _____
 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 Raven Resources, LLC 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 Westfield 1-1 gas well on the grounds that said well:

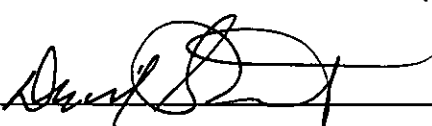
(Check one)

- 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: 11/10/11

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Signature: 
Title: Managing Member

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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Test Date:
9/27/2011

API No. 15
15-199-20363

Company Raven Resources, LLC		Lease Westfield		Well Number #1-1	
County Wallace County	Location NW/4 NW/4	Section 01	TWP 12S	RNG (E/W) 42W	Acres Attributed
Field		Reservoir Niobrara	Gas Gathering Connection Closed gathering system (West Kansas Pipeline)		
Completion Date 8/2008		Plug Back Total Depth 991.34'	Packer Set at		
Casing Size 4 1/2"	Weight 10.5	Internal Diameter	Set at 1033.34'	Perforations 830' - 863'	To
Tubing Size 2 3/8"	Weight 4.7	Internal Diameter	Set at 825'	Perforations	To
Type Completion (Describe) CO2 Frac		Type Fluid Production	Pump Unit or Traveling Plunger? Yes / No No		
Producing Thru (Annulus / Tubing) Tubing		% Carbon Dioxide	% Nitrogen	Gas Gravity - G _g	
Vertical Depth(H) 1040'		Pressure Taps		(Meter Run) (Prover) Size .500"	
Pressure Buildup: Shut in 9/26 20 11 at 9 am (AM) (PM)		Taken 9/27 20 11 at 9 am (AM) (PM)			
Well on Line: Started 9/27 20 11 at 9 am (AM) (PM)		Taken 9/28 20 11 at 9 am (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	.500	16	0			8		8		24	0
Flow	.500	16.4	3			5		5		24	0

FLOW STREAM ATTRIBUTES

Plate Coefficient (F _s) (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 (Mcfd)	GOR (Cubic Feet/Barrel)	Flowing Fluid Gravity G _m
						RECEIVED NOV 04 2011		

(OPEN FLOW) (DELIVERABILITY) CALCULATION

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

(P _o) ² - (P _s) ² or (P _o) ² - (P _d) ²	(P _o) ² - (P _w) ²	Choose formula 1 or 2: 1. P _o ² - P _s ² 2. P _o ² - P _d ² divided by: P _o ² - P _w ²	LOG of formula 1, or 2, and divide by: $\frac{P_o^2 - P_s^2}{P_o^2 - P_w^2}$	Backpressure Curve Slope = "n" ----- or ----- 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 25 day of OCTOBER, 20 11.

[Signature]
For Company

Witness (if any)

For Commission

For Company

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 Raven Resources, LLC 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 Westfield 1-1 gas well on the grounds that said well:

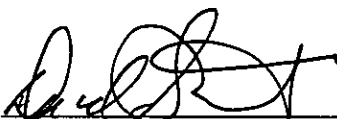
(Check one)

- 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: 10/25/11

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NOV 04 2011
KCC WICHITA

Signature: 

Title: Mg. member

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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Type Test:

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- Deliverability

(See Instructions on Reverse Side)

Test Date: 9/27/11

API No. 15

Company		Lease <u>Westfield</u>			Well Number <u>1-1</u>
County	Location	Section	TWP	RNG (E/W)	Acres Attributed
Field		Reservoir		Gas Gathering Connection	
Completion Date		Plug Back Total Depth		Packer Set at	
Casing Size	Weight	Internal Diameter	Set at	Perforations	To
Tubing Size	Weight	Internal Diameter	Set at	Perforations	To
Type Completion (Describe)		Type Fluid Production		Pump Unit or Traveling Plunger? Yes / No	
Producing Thru (Annulus / Tubing)		% Carbon Dioxide		% Nitrogen	
Vertical Depth(H)		Pressure Taps		(Meter Run) (Prover) Size	
Pressure Buildup: Shut in <u>9/26</u> 20 <u>11</u> at <u>9:00</u> (AM) (PM) Taken <u>9/27</u> 20 <u>11</u> at <u>9:00</u> (AM) (PM)					
Well on Line: Started <u>9/27</u> 20 <u>11</u> at <u>9:00</u> (AM) (PM) Taken <u>9/28</u> 20 <u>11</u> at <u>9:00</u> (AM) (PM)					

OBSERVED SURFACE DATA

Duration of Shut-in 24 Hours

Static / Dynamic Property	Critical Size (Inches)	Circle one Meter or 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						<u>8</u>		<u>8</u>		<u>24</u>	<u>0</u>
Flow						<u>5</u>		<u>5</u>		<u>24</u>	<u>0</u>

FLOW STREAM ATTRIBUTES

Plate Coefficient (F _v) (F _s) 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 _{dv}	Metered Flow R (Mcfd)	GOR (Cubic Feet/ Barrel)	Flowing Fluid Gravity

(OPEN FLOW) (DELIVERABILITY) CALCULATIONS

(P₀)² = _____ : (P_w)² = _____ : P_d = _____ % (P₀ - 14.4) + 14.4 = _____ :

(P ₀) ² - (P _w) ² or (P ₀) ² - (P _d) ²	(P ₀) ² - (P _w) ²	Choose formula 1 or 2: 1. P ₀ ² - P _d ² 2. P ₀ ² - P _w ² divided by P ₀ ² - P _w ²	LOG of formula 1 or 2 and divide by: $\frac{P_0^2 - P_w^2}{P_0^2 - P_d^2}$	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 _____ day of _____, 20_____.

Witness (if any)

For Commission

For Company

Checked by

RECEIVED
NOV 04 2011
OCC WICHITA

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 Raven Rebovorsas LLC 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 Westfield H1 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: 9/27/11

Signature: [Handwritten Signature]
 Title: Pumper

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/bulldup 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.