

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

**KCC WICHITA**

**MAY 12 2014**

**RECEIVED**

Type Test:

(See Instructions on Reverse Side)

Open Flow

Deliverability

Test Date:  
4-15-2014

API No. 15  
15-009-24718-00-00

Company Rama Operating Co., Inc		Lease Aldrich		Well Number 1	
County Barton	Location NENE NE	Section 29	TWP 19S	RNG (E/W) 14 W	Acres Attributed
Field Heizer		Reservoir Chase		Gas Gathering Connection American Energies	
Completion Date 10/2001		Plug Back Total Depth 1840		Packer Set at None	
Casing Size 4 1/2"	Weight 9.5#	Internal Diameter 4.0	Set at 2028'	Perforations 1740-44	To 1760-64
Tubing Size 2 3/8"	Weight 6.5#	Internal Diameter 2.441	Set at 1726'	Perforations	To
Type Completion (Describe) Single-Acidize		Type Fluid Production Salt water		Pump Unit or Traveling Plunger? Yes / No Pumping Unit	
Producing Thru (Annulus / Tubing) Annulus		% Carbon Dioxide		% Nitrogen 26.58	Gas Gravity - G <sub>g</sub> 0.685
Vertical Depth(H)		Pressure Taps Flange		(Meter Run) (Prover) Size 2"	
Pressure Buildup:	Shut in	April 11, 2014	at 9:00am	(AM) (PM)	Taken
		April 14, 2014	at 9:00am	(AM) (PM)	
Well on Line:	Started	April 14, 2014	at 9:00am	(AM) (PM)	Taken
		April 15, 2014	at 9:00am	(AM) (PM)	

**OBSERVED SURFACE DATA**

Duration of Shut-in 72 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>i</sub> ) or (P <sub>c</sub> )		Tubing Wellhead Pressure (P <sub>w</sub> ) or (P <sub>i</sub> ) or (P <sub>c</sub> )		Duration (Hours)	Liquid Produced (Barrels)
						psig	psia	psig	psia		
Shut-in						100	114.4	10	24.4	72	15
Flow	.375	40	8	60	60	40	54.4	10	24.4	24	

**FLOW STREAM ATTRIBUTES**

Plate Coefficient (F <sub>v</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>t</sub>	Deviation Factor F <sub>pv</sub>	Metered Flow R (Mcfd)	GOR (Cubic Feet/ Barrel)	Flowing Fluid Gravity G <sub>m</sub>
.6860	54.4	20.86	1.208	1.00	1.00	17		

**(OPEN FLOW) (DELIVERABILITY) CALCULATIONS**

(P<sub>c</sub>)<sup>2</sup> = 13.09 : (P<sub>w</sub>)<sup>2</sup> = 2.96 : P<sub>d</sub> = \_\_\_\_\_ % (P<sub>c</sub> - 14.4) + 14.4 = \_\_\_\_\_ : (P<sub>d</sub>)<sup>2</sup> = 0.207  
(P<sub>d</sub>)<sup>2</sup> = \_\_\_\_\_

(P <sub>c</sub> ) <sup>2</sup> - (P <sub>d</sub> ) <sup>2</sup> or (P <sub>c</sub> ) <sup>2</sup> - (P <sub>w</sub> ) <sup>2</sup>	(P <sub>c</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>w</sub> <sup>2</sup> 2. P <sub>c</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: P <sub>c</sub> <sup>2</sup> - P <sub>w</sub> <sup>2</sup>	Backpressure Curve Slope = "n" or Assigned Standard Slope	n x LOG [ ]	Antilog	Open Flow Deliverability Equals R x Antilog (Mcfd)
12.88	10.13	1.27	.0104	.787	.0082	1.208	21

Open Flow 21 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 28th day of April, 20 14.

\_\_\_\_\_  
Witness (if any)

\_\_\_\_\_  
For Company

\_\_\_\_\_  
For Commission

\_\_\_\_\_  
Checked by