

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

Type Test:

(See Instructions on Reverse Side)

✓ Open Flow  
Deliverability

Test Date:  
7-15-15

API No. 15  
175-20548 -00-00

Company <b>QUINQUE OPERATING COMPANY</b>		Lease <b>KEATING</b>			Well Number <b>1-24</b>
County <b>SEWARD</b>	Location <b>C SW NW</b>	Section <b>24</b>	TWP <b>34S</b>	RNG (E/W) <b>31W</b>	Acres Attributed
Field <b>Wildcat</b>		Reservoir <b>Morrow</b>	Gas Gathering Connection <b>DCP</b>		
Completion Date <b>2/5/92</b>		Plug Back Total Depth <b>5807</b>		Packer Set at	
Casing Size <b>4.5</b>	Weight <b>10.5</b>	Internal Diameter <b>4.052</b>	Set at <b>5930</b>	Perforations <b>5626</b>	To <b>5646</b>
Tubing Size <b>2.375</b>	Weight <b>4.7</b>	Internal Diameter <b>1.995</b>	Set at <b>5711</b>	Perforations	To
Type Completion (Describe) <b>Single Gas</b>		Type Fluid Production <b>OIL/WATER</b>		Pump Unit or Traveling Plunger? Yes / No <b>YES-PUMP</b>	
Producing Thru (Annulus / Tubing) <b>ANNULUS</b>		% Carbon Dioxide <b>0.108</b>		% Nitrogen <b>4.657</b>	Gas Gravity - G <sub>g</sub> <b>.711</b>
Vertical Depth(ft) <b>5636</b>		Pressure Taps <b>FLANGE</b>			(Meter Run) (Prover) Size <b>2.067"</b>
Pressure Buildup:	Shut in <b>7-11-15</b>	<b>20</b> at <b>1430</b>	(AM) (PM) Taken <b>7-14-15</b>	<b>20</b> at <b>1430</b>	(AM) (PM)
Well on line:	Started <b>7-14-15</b>	<b>20</b> at <b>1430</b>	(AM) (PM) Taken <b>7-15-15</b>	<b>20</b> at <b>1430</b>	(AM) (PM)

### OBSERVED SURFACE DATA

Duration of Shut-in, **72.0** Hours

Static Dynamic Property	Orifice Size (inches)	Circumferential Meter Prover Pressure psig (P <sub>m</sub> )	Pressure Differential in Inches H <sub>2</sub> O	Flowing Temperature I	Well Head Temperature I	Casing Wellhead Pressure (P <sub>w</sub> ) or (P <sub>1</sub> ) or (P <sub>c</sub> )		Tubing Wellhead Pressure (P <sub>w</sub> ) or (P <sub>1</sub> ) or (P <sub>c</sub> )		Duration (Hours)	Liquid Produced (Barrels)
						psig	psia	psig	psia		
Shut-in						385.9	400.3			72.0	
Flow	.375	53.9	26.2	115	75	54.8	69.2			24.0	3

### FLOW STREAM ATTRIBUTES

Plate Coefficient (F <sub>1</sub> ) (F <sub>v</sub> ) Mcfd	Circumferential Meter or Prover Pressure psia	Press Extension $\sqrt{P_m \times h}$	Gravity Factor F <sub>g</sub>	Flowing Temperature Factor F <sub>tt</sub>	Deviation Factor F <sub>pv</sub>	Metered Flow R (Mcfd)	GOR (Cubic Feet/ Barrel)	Flowing Fluid Gravity G <sub>g</sub>
.686	68.30	42.30	1.1859	0.9510	1.0051	32.9	NONE	0.711

### (OPEN FLOW) (DELIVERABILITY) CALCULATIONS

(P<sub>1</sub>)<sup>2</sup> = 160.2 ; (P<sub>w</sub>)<sup>2</sup> = 4.8 ; P<sub>d</sub> = 17.3 % ; (P<sub>c</sub> - 14.4) + 14.4 = 400.3 ; (P<sub>d</sub>)<sup>2</sup> = 0.207 ; (P<sub>d</sub>)<sup>2</sup> =

(P <sub>1</sub> ) <sup>2</sup> - (P <sub>w</sub> ) <sup>2</sup> or (P <sub>1</sub> ) <sup>2</sup> · (P <sub>w</sub> ) <sup>2</sup>	(P <sub>1</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>w</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)
160.03	155.45	1.029	0.0126	0.850	0.0107	1.0250	33.72

Open Flow **34** 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 15 day of JULY, 20 15

*Copy to KCC Wichita*  
Witness (if any)

**KCC WICHITA**

**AUG 06 2015**

**RECEIVED**

*Precision Wireline & Testing*  
For Company

*Markus Buch*  
Checked by

For Commission