

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

Type Test:

(See Instructions on Reverse Side)

- Open Flow
- Deliverability

Test Date:  
6/17 to 6/18/13

API No. 15  
151-20388-00-01

Company <b>L.D. Drilling, Inc.</b>		Lease <b>Koenemann "OWWO"</b>		Well Number <b>1</b>	
County <b>Pratt</b>	Location <b>CSWNW</b>	Section <b>28</b>	TWP <b>26S</b>	RNG (E/W) <b>11W</b>	Acres Attributed
Field <b>Haynesville</b>		Reservoir <b>Arbuckle</b>		Gas Gathering Connection <b>Lumen</b>	
Completion Date <b>6/23/77</b>		Plug Back Total Depth		Packer Set at <b>none</b>	
Casing Size <b>5.5</b>	Weight	Internal Diameter	Set at <b>4344</b>	Perforations <b>4278</b>	To <b>4280</b>
Tubing Size <b>2.375</b>	Weight	Internal Diameter	Set at <b>4319</b>	Perforations	To
Type Completion (Describe) <b>single</b>		Type Fluid Production <b>none</b>		Pump Unit or Traveling Plunger? Yes / No <b>yes - pump unit</b>	
Producing Thru (Annulus / Tubing) <b>annulus</b>		% Carbon Dioxide <b>.194</b>		% Nitrogen <b>6.852</b>	
Gas Gravity - G <sub>g</sub> <b>.679</b>		Vertical Depth(H) <b>flange</b>		Pressure Taps <b>flange</b>	
Pressure Buildup: Shut in <b>6/14</b> 20 <b>13</b> at <b>9:15 am</b> (AM) (PM) Taken <b>6/17</b> 20 <b>13</b> at <b>9:15 am</b> (AM) (PM)		Well on Line: Started <b>6/17</b> 20 <b>13</b> at <b>9:45 am</b> (AM) (PM) Taken <b>6/18</b> 20 <b>13</b> at <b>9:45 am</b> (AM) (PM)			

### OBSERVED SURFACE DATA

Duration of Shut-in **72** Hours

Static / Dynamic Property	Orifice Size (inches)	Circle one: Meter Prover Pressure psig (P <sub>m</sub> )	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						648	662.4			72	
Flow	<b>.750</b>	<b>140</b>	<b>136.7</b>	<b>54</b>		<b>592</b>	<b>606.4</b>			<b>24</b>	

### FLOW STREAM ATTRIBUTES

Plate Coefficient (F <sub>b</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>tt</sub>	Deviation Factor F <sub>pv</sub>	Metered Flow R (Mcfd)	GOR (Cubic Feet/ Barrel)	Flowing Fluid Gravity G <sub>m</sub>
<b>2.779</b>	<b>154.4</b>	<b>145.28</b>	<b>1.214</b>	<b>1.006</b>	<b>1.014</b>	<b>500</b>		<b>.679</b>

### (OPEN FLOW) (DELIVERABILITY) CALCULATIONS

(P<sub>c</sub>)<sup>2</sup> = **438.773** ; (P<sub>w</sub>)<sup>2</sup> = **367.720** ; P<sub>d</sub> = \_\_\_\_\_ % (P<sub>c</sub> - 14.4) + 14.4 = \_\_\_\_\_ ; (P<sub>a</sub>)<sup>2</sup> = **0.207** ; (P<sub>d</sub>)<sup>2</sup> = \_\_\_\_\_

(P <sub>c</sub> ) <sup>2</sup> - (P <sub>a</sub> ) <sup>2</sup> OR (P <sub>c</sub> ) <sup>2</sup> - (P <sub>d</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>a</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: $\left[ \frac{P_c^2 - P_w^2}{P_c^2 - P_a^2} \right]$	Backpressure Curve Slope = "n" ----- or ----- Assigned Standard Slope	n x LOG $\left[ \frac{P_c^2 - P_w^2}{P_c^2 - P_a^2} \right]$	Antilog	Open Flow Deliverability Equals R x Antilog (Mcfd)
<b>438.566</b>	<b>71.053</b>	<b>6.172</b>	<b>.7904</b>	<b>.740</b>	<b>.5849</b>	<b>3.84</b>	<b>1920</b>

Open Flow **1920** Mcfd @ 14.65 psia X **.50** = Deliverability **960** 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 25th day of June, 2013

Witness (if any)

*[Signature]*  
For Company

For Company

**KCC WICHITA**

**JUN 27 2013**

**RECEIVED**