

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

(See Instructions on Reverse Side)

Type Test:

- Open Flow  
 Deliverability

Test Date:  
5/30/12

API No. 15  
129-20387-0002

Company <b>Nadel and Gussman, LLC</b>			Lease <b>Stuckey</b>		Well Number <b>2-31</b>
County <b>Morton</b>	Location <b>1260' FNL 2471' FEL</b>	Section <b>31</b>	TWP <b>33S</b>	RNG (E/W) <b>42W</b>	Acres Attributed <b>640</b>
Field <b>Greenwood</b>		Reservoir <b>Topeka</b>	Gas Gathering Connection <b>Regency</b>		
Completion Date <b>8/17/2001</b>		Plug Back Total Depth <b>3188'</b>	Packer Set at <b>NA</b>		
Casing Size <b>5 1/2"</b>	Weight <b>14#</b>	Internal Diameter <b>5.012"</b>	Set at <b>3290'</b>	Perforations <b>2688'</b>	To <b>3176'</b>
Tubing Size <b>2 3/8"</b>	Weight <b>4.7#</b>	Internal Diameter <b>1.995"</b>	Set at <b>3175'</b>	Perforations	To
Type Completion (Describe) <b>Single (Gas)</b>		Type Fluid Production <b>Water</b>	Pump Unit or Traveling Plunger? Yes / No <b>Pump Unit</b>		
Producing Thru (Annulus / Tubing) <b>Annulus</b>		% Carbon Dioxide	% Nitrogen	Gas Gravity - G <sub>s</sub>	
Vertical Depth(H)		Pressure Taps <b>Flange</b>		(Meter Run) (Prover) Size <b>2"</b>	
Pressure Buildup:	Shut in <b>5/26</b>	<b>20 12</b> at <b>10:00</b>	(AM) (PM) Taken <b>5/29</b>	<b>20 12</b> at <b>10:00</b>	(AM) (PM)
Well on Line:	Started <b>5/29</b>	<b>20 12</b> at <b>10:00</b>	(AM) (PM) Taken <b>5/30</b>	<b>20 12</b> at <b>10:00</b>	(AM) (PM)

### OBSERVED SURFACE DATA

Duration of Shut-in **72** Hours

Static / Dynamic Property	Orifice Size (inches)	Circle one Meter or 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						10.9	25.3			72	
Flow	.625	54.56	23.68			1	15.4			24	

### FLOW STREAM ATTRIBUTES

Plate Coefficient (F <sub>p</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>s</sub>
2.2355	68.95	40.4				90.3		

### (OPEN FLOW) (DELIVERABILITY) CALCULATIONS

$(P_c)^2 = .640$  ;  $(P_w)^2 = .237$  ;  $P_d = \underline{\hspace{1cm}}$  % ;  $(P_c - 14.4) + 14.4 = 10.9$  ;  $(P_w)^2 = 0.207$  ;  $(P_d)^2 = \underline{\hspace{1cm}}$

$(P_c)^2 - (P_w)^2$ or $(P_c)^2 - (P_d)^2$	$(P_c)^2 - (P_w)^2$	Choose formula 1 or 2: 1. $P_c^2 - P_d^2$ 2. $P_c^2 - P_w^2$ divided by: $P_c^2 - P_w^2$	LOG of formula 1. or 2. and divide by: $P_c^2 - P_w^2$	Backpressure Curve Slope = "n" ----- Assigned Standard Slope	n x LOG	Antilog	Open Flow Deliverability Equals R x Antilog (Mcfd)
.433	.403	1.074	.0312	.85	.0265	1.0623	96.0

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 15th day of May, 20 12

Witness (if any)

For Commission

*David W. Yeager*  
For Company  
Checked by

RECEIVED  
JUN 20 2012  
KCC WICHITA