

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

FORM G-2
(Rev. 8/98)

62

TYPE TEST: Open Flow
 Deliverability

TEST DATE: 12/2/2016 API No. 15-097-21823-00 00

Company Herman L. Loeb LLC		Lease Koger			Well Number 3	
County Kiowa	Location NE SE NW NE	Section 1	TWP 30s	RNG (E/W) 19	Acres Attributed 320	
Field Alford	Reservoir Viola	Gas Gathering Connection Oneok				
Completion Date 6/6/2016	Plug Back Total Depth 5300	Packer Set at none				
Casing Size 5.500	Weight 15.500	Internal Diameter 4.950	Set at 5345	Perforations 5308	To 5312	
Tubing Size 2.375	Weight 4.700	Internal Diameter 1.995	Set at 4871	Perforations	To	
Type Completion (Describe) single	Type Fluid Production water	Pump Unit or Traveling Plunger? no				
Producing Thru (Annulus/Tubing) tubing	% Carbon Dioxide 0.189	% Nitrogen 9.690	Gas Gravity- Gg 0.678			
Vertical Depth (H) 5310	Pressure Taps flange	Meter Run Size 2.067				
Pressure Buildup: Shut in Well on Line:	Started 11/28/2016@0900 12/1/2016@1100	TAKEN TAKEN	12/1/2016@1100 12/2/2016@1315			

OBSERVED SURFACE DATA

Static/ Dynamic Property	Orifice Size in.	Meter Pressure psig	Pressure Diff. In. H ₂ O	Flowing Temp. t.	WellHead Temp. t.	Casing WellHead Press. (P _w) (P _e) (P _c)		Tubing WellHead Press. (P _w) (P _e) (P _c)		Duration (Hours)	Liquid Prod. Barrels
						psig	psia	psig	psia		
Shut-in						1142	1156	1106	1120	74.0	
Flow	1.250	61.6	106.00	54		926	940	921	935	26.2	

FLOW STREAM ATTRIBUTES

COEFFICIENT (F _b) Mcf/d	(METER) PRESSURE psia	EXTENSION $\sqrt{P_m \times H_w}$	GRAVITY FACTOR Fg	FLOWING TEMP FACTOR Ft	DEVIATION FACTOR Fpv	RATE OF FLOW R Mcf/d	GOR	G _m
8.329	76.0	89.76	1.2145	1.0058	1.0067	919		0.678

(OPEN FLOW)(DELIVERABILITY) CALCULATIONS

(P_c)² = 1337.3 (P_w)² = 884.4 P_d = 5.6 % (P_c - 14.4) + 14.4 = (P_a)² = 0.207
(P_d)² = 4.15

$(P_c)^2 - (P_a)^2$ or $(P_c)^2 - (P_d)^2$	$(P_c)^2 - (P_w)^2$	$\frac{(P_c)^2 - (P_a)^2}{(P_c)^2 - (P_d)^2}$ or $\frac{(P_c)^2 - (P_a)^2}{(P_c)^2 - (P_w)^2}$	LOG	Backpressure Curve Slope "n" --- or --- Assigned Standard Slope	n x LOG	Antilog	Open Flow Deliverability = R x Antilog Mcf/d
1337.05	452.91	2.952	0.4701	0.955	0.4490	2.812	2584
1333.11	452.91	2.943	0.4689	0.955	0.4478	2.804	2577

OPEN FLOW 2584 Mcfd @ 14.65 psia DELIVERABILITY 2577 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 herein and that said report is true and correct. Executed this the 20 day of Dec, 2016

Witness (if any)

For Commission

KCC WICHITA

DEC 2-2 2016

RECEIVED

For Company
Checked by