

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

FORM G-2
(Rev. 8/96)

TYPE TEST:

- Open Flow
 Deliverability

TEST DATE: 5-18-15 API No. 15-067-20611-0000

Company Ritchie Exploration		Lease Stephenson			Well Number 4B	
County Ford	Location SE NW NW	Section 4-28S-22W	TWP 	RNG (E/W) 	Acres Attributed 640	
Field Lamb North	Reservoir Mississippi	Gas Gathering Connection 5-21-15				
Completion Date 7-1-10	Plug Back Total Depth 5165	Packer Set at 				
Casing Size 4.500	Weight 10.500	Internal Diameter 4.052	Set at 5187	Perforations 4988	To 4991	
Tubing Size 2.375	Weight 4.700	Internal Diameter 1.995	Set at 4992	Perforations 	To 	
Type Completion (Describe) New Well	Type Fluid Production None	Pump Unit or Traveling Plunger? no				
Producing Thru (Annulus/Tubing) Tubing	% Carbon Dioxide .087	% Nitrogen 9.531	Gas Gravity- Gg .662			
Vertical Depth (ft) 4979	Pressure Taps Flange	Meter Run Size 3.068				
Pressure Buildup: Shut in 5-18-15 @ 10:30 A.M.	TAKEN		5-18-15 @ 10:30 A.M.			
Well on Line: Started 5-18-15 @ 10:30 A.M.	TAKEN		5-18-15 @ 10:30 A.M.			

**KCC WICHITA
MAY 21 2015
RECEIVED**

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 _c) (P _a)		Tubing Wellhead Press. (P _w) (P _c) (P _a)		Duration (Hours)	Liquid Prod. Barrels
						psig	psia	psig	psia		
Shut-in						1023	1037	1020	1034	72.0	
Flow	1.625	37.2	7.00	60	60	884	899	838	852	24.0	

FLOW STREAM ATTRIBUTES

COEFFICIENT (F _b) Mcfd	(METER) PRESSURE psia	EXTENSION $\sqrt{P_m - P_w}$	GRAVITY FACTOR F _g	FLOWING TEMP FACTOR F _t	DEVIATION FACTOR F _{pv}	RATE OF FLOW R Mcfd	GOR	G _n
13,580	61.6	19.01	1.2291	1.0000	1.0042	318		.662

(OPEN FLOW)(DELIVERABILITY) CALCULATIONS

(P_a)² = 1077.2 (P_w)² = 808.6 P_d = (P_c - 14.4) + 14.4 = (P_a)² = 0.207
(P_d)² =

$(P_a)^2 - (P_w)^2$	$(P_a)^2 - (P_w)^2$	$\frac{(P_a)^2 - (P_w)^2}{(P_a)^2 - (P_w)^2}$ OR $\frac{(P_a)^2 - (P_w)^2}{(P_a)^2 - (P_w)^2}$	LOG	Backpressure Curve Slope "n" ----- or ----- Assigned Standard Slope	n x LOG	Antilog	Open Flow Deliverability = R x Antilog Mcfd
1077.03	268.68	4.009	.6030	1.000	.6030	4.009	1276

OPEN FLOW 1276 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 herein and that said report is true and correct. Executed this the 15th day of May, 2015.

Witness (if any)

For Commission

Ritchie Exploration
For Company
Hisco TLM
Checked by