

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

FORM G-2  
(Rev.8/98)

TYPE TEST:

- Open Flow  
 Deliverability

TEST DATE: 1/11/2012

API No. 057-20611-0000

15

Company Ritchie Exploration		Lease Stephenson		Well Number 4B	
County Ford	Location SE NW NW	Section 4	TWP 28s	RNG(E/W) 22w	Acres Attributed 640
Field Lamb North	Reservoir Mississippian	Gas Gathering Connection Superior Pipeline			
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 4968	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 0.087	% Nitrogen 9.531	Gas Gravity- Gg 0.662		
Vertical Depth (H) 4979	Pressure Taps flange	Meter Run Size 3.067			
Pressure Buildup: Shut in	1/6/2012@ 1030	TAKEN	1/10/2012@1330		
Well on Line: Started	1/10/2012@ 1330	TAKEN	1/11/2012@1330		

**OBSERVED SURFACE DATA**

Static/ Dynamic Property	Orifice Size- in.	Meter Pressure psig	Pressure Diff. In. H <sub>2</sub> O	Flowing Temp. t.	WellHead Temp. t.	Casing WellHead Press. (P <sub>w</sub> ) (P <sub>t</sub> ) (P <sub>c</sub> )		Tubing WellHead Press. (P <sub>w</sub> ) (P <sub>t</sub> ) (P <sub>c</sub> )		Duration (Hours)	Liquid Prod. Barrels
						psig	psia	psig	psia		
Shut-in						1202	1217	1201	1216	75.0	
Flow	1.625	50.0	35.20	61		929	943	899	914	24.0	

**FLOW STREAM ATTRIBUTES**

COEFFICIENT (F <sub>b</sub> ) Mcf/d	(METER) PRESSURE psia	EXTENSION $\sqrt{P_m \times H_w}$	GRAVITY FACTOR F <sub>g</sub>	FLOWING TEMP FACTOR F <sub>t</sub>	DEVIATION FACTOR F <sub>pv</sub>	RATE OF FLOW R Mcf/d	GOR	G <sub>m</sub>
13.580	64.4	47.61	1.2291	0.9990	1.0052	798		0.662

**(OPEN FLOW)(DELIVERABILITY) CALCULATIONS**

(P<sub>c</sub>)<sup>2</sup> = 1481.8

(P<sub>w</sub>)<sup>2</sup> = 890.8

P<sub>d</sub> = 4.1

% (P<sub>c</sub> - 14.4) + 14.4 =

(P<sub>a</sub>)<sup>2</sup> = 0.207

(P<sub>d</sub>)<sup>2</sup> = 2.50

$(P_c)^2 - (P_a)^2$ 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
1481.61	591.06	2.507	0.3991	1.000	0.3991	2.507	2000
1479.32	591.06	2.503	0.3984	1.000	0.3984	2.503	1997

OPEN FLOW 2000 Mcfd @ 14.65 psia DELIVERABILITY 1997 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 15 day of Jan, 2012

RECEIVED

JAN 17 2012

Witness (if any)

For Commission

For Company

Checked by

KCC WICHITA