

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

FORM G-2  
(Rev. 8/98)

TYPE TEST:

- ☒ Open Flow  
☒ Deliverability

*INVOICE  
#5192 \$275.00*

TEST DATE: 10/18/2002

API No.

Company John O. Farmer		Lease Patterson			Well Number 1-33	
County Haskell	Location 33 30s 31w	Section	TWP	RNG (E/W)	Acres Attributed	
Field	Reservoir Morrow	Gas Gathering Connection 2"				
Completion Date 9/23/99	Plug Back Total Depth 5525	Packer Set at				
Casing Size 4.500	Weight 10.500	Internal Diameter 4.052	Set at 5569	Perforations 5405	To 5411	
Tubing Size 2.375	Weight 4.700	Internal Diameter 1.901	Set at 5400	Perforations	To	
Type Completion (Describe) Single	Type Fluid Production Trace Condensate	Pump Unit or Traveling Plunger? no				
Producing Thru (Annulus/Tubing) tubing	% Carbon Dioxide .320	% Nitrogen 9.120			Gas Gravity- Gg .692	
Vertical Depth (ft) 5407	Pressure Taps flange	Meter Run Size 3.068				
Pressure Buildup: Shut in	10/14/2002 @ 0900	TAKEN	10/17/2002 @ 1030			
Well on Line: Started	10/17/2002 @ 1030	TAKEN	10/18/2002 @ 1030			

**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						810	824	826	840	73.3	
Flow	1.750	39.0	6.50	69		670	684	652	666	24.0	

**FLOW STREAM ATTRIBUTES**

COEFFICIENT (F <sub>b</sub> ) Mcfd	(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 Mcfd	GOR	G <sub>m</sub>
16.010	53.4	18.63	1.2021	.9915	1.0045	357		.692

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

$(P_c)^2 = 679.6$        $(P_w)^2 = 468.4$        $P_d = 9.7$       %  $(P_c - 14.4) + 14.4 =$        $(P_a)^2 = 0.207$   
 $(P_d)^2 = 6.40$

$(P_c)^2 - (P_a)^2$ 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 $\frac{(P_c)^2 - (P_w)^2}{(P_c)^2 - (P_d)^2}$	LOG	Backpressure Curve Slope "n" ---- or ---- Assigned Standard Slope	n x LOG	Antilog	Open Flow Deliverability = R x Antilog Mcfd
679.43	211.23	3.217	.5074	.699	.3547	2.263	808
673.24	211.23	3.187	.5034	.699	.3519	2.248	802

OPEN FLOW      808      Mcfd @ 14.65 psia      DELIVERABILITY      802      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 22 day of Oct, 2002

Witness (if any)

For Company

For Commission

Checked by

[illegible]