

KANSAS CORPORATION COMMISSION  
ONE POINT STABILIZED OPEN FLOW OR DELIVERABILITY TEST

FORM G-2  
(Rev. 8/98)

TYPE TEST:

- Open Flow  
 Deliverability

TEST DATE: 9/14/12

API No. 15-033-21,205-00-00

Company Thoroughbred Associates		Lease <i>Bernice</i> HERD			Well Number 3	
County COMANCHE		Location 120'E C SW SE		Section TWP RNG (E/W) SEC 15-T32S-19W		Acres Attributed 160
Field		Reservoir MISSISSIPI/ALTA		Gas Gathering Connection <i>Thoroughbred &amp; Associates</i>		
Completion Date		Plug Back Total Depth 5250		Packer Set at		
Casing Size 5.500	Weight 15.500	Internal Diameter 4.950	Set at 5280	Perforations 4968	To 5194	
Tubing Size 2.375	Weight 4.700	Internal Diameter 1.995	Set at 5200	Perforations	To	
Type Completion (Describe) <i>Commingled (Gas)</i>		Type Fluid Production		Pump Unit or Traveling Plunger? <i>No-Flowing</i>		
Producing Thru (Annulus/Tubing) TUBING		% Carbon Dioxide .121		% Nitrogen 1.063		Gas Gravity- Gg .598
Vertical Depth (ft) 4968		Pressure Taps FLANGE		Meter Run Size 3		
Pressure Buildup: Shut in		9/11/12		TAKEN		11:00 AM
Well on Line: Started		9/14/12		TAKEN		9:15 AM

RECEIVED  
OCT 31 2012  
KCC WICHITA

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						185	199			70.3	
Flow	.750	45.0	1.00	60	60	50	64			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>
2.740	59.4	7.71	1.2932	1.0000	1.0047	27		.598

(OPEN FLOW)(DELIVERABILITY) CALCULATIONS

(P<sub>c</sub>)<sup>2</sup> = 39.8      (P<sub>w</sub>)<sup>2</sup> = 4.1      P<sub>d</sub> = 25.1      % (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
39.55	35.61	1.111	.0456	.599	.0273	1.065	29
37.26	35.61	1.046	.0196	.599	.0118	1.027	28

OPEN FLOW      29      Mcfd @ 14.65 psia      DELIVERABILITY      28      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 29<sup>th</sup> day of October, 20 12

Witness (if any)

For Commission

Checked by