

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

FORM G-2  
(Rev. 8/98)

**TYPE TEST:**

- Open Flow  
 Deliverability

TEST DATE: 12/13/10

API No. 15-033-20,969 - 0000

Company Thoroughbred Associates		Lease RIETZKE			Well Number 1	
County COMANCHE	Location N/2-NE-NW	Section SEC 21-T32S-R19W	TWP	RNG (E/W)	Acres Attributed 160	
Field	Reservoir MARMATON	Gas Gathering Connection				
Completion Date 9/23/98	Plug Back Total Depth 5200	Packer Set at NONE				
Casing Size 5.500	Weight 15.500	Internal Diameter 4.950	Set at 5403	Perforations 4851	To 4860	
Tubing Size 2.375	Weight 47.000	Internal Diameter 1.995	Set at 5180	Perforations	To	
Type Completion (Describe) CASING	Type Fluid Production	Pump Unit or Traveling Plunger? PUMP				
Producing Thru (Annulus/Tubing) CASING	‡ Carbon Dioxide	‡ Nitrogen 4.880	Gas Gravity- Gg .702			
Vertical Depth (ft) 4851	Pressure Taps FLANGE	Meter Run Size 3				
Pressure Buildup: Shut in Well on Line: Started	12/10/10 12/13/10	TAKEN TAKEN	9:15 AM 10:00 am			

**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						205	219			72.8	
Flow	1.500	18.0	40.00	60	60	40	54			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>
11.410	32.4	36.00	1.1935	1.0000	1.0032	491		.702

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

(P<sub>c</sub>)<sup>2</sup> = 48.1      (P<sub>w</sub>)<sup>2</sup> = 3.2      P<sub>d</sub> = 22.8      ‡      (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

$\frac{(P_c)^2 - (P_a)^2}{(P_c)^2 - (P_d)^2}$ or $\frac{(P_c)^2 - (P_d)^2}{(P_c)^2 - (P_w)^2}$	$\frac{(P_c)^2 - (P_a)^2}{(P_c)^2 - (P_d)^2}$ or $\frac{(P_c)^2 - (P_d)^2}{(P_c)^2 - (P_w)^2}$	LOG	Backpressure Curve Slope "n" ----- or ----- Assigned Standard Slope	n x LOG	Antilog	Open Flow Deliverability = R x Antilog Mcf/d
47.93	44.97	1.066	.0277	.750	.0208	515
45.64	44.97	1.015	.0064	.750	.0048	497

OPEN FLOW      515      Mcfd @ 14.65 psia      DELIVERABILITY      497      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 3<sup>rd</sup> day of January, 20 11

Witness (if any) \_\_\_\_\_  
For Commission \_\_\_\_\_

RECEIVED  
JAN 03 2011

\_\_\_\_\_  
For Company  
Checked by \_\_\_\_\_

KCC WICHITA