

KANSAS CORPORATION COMMISSION
ONE POINT STABILIZED OPEN FLOW OR DELIVERABILITY TEST

FORM G-2
(Rev.8/98)

TYPE TEST:

- ☒ Open Flow
☒ Deliverability

TEST DATE: 10/30/99 API No. 15-075-20612

Company Horsehoe Operating Inc		Lease Boltz		Well Number 2	
County Hamilton	Location SE NE	Section 1	TWP 24s	RNG (E/W) 41	Acres Attributed 640
Field Bradshaw	Reservoir Winfield	Gas Gathering Connection KN			
Completion Date 10-15-1996	Plug Back Total Depth 2405	Packer Set at			
Casing Size 4.500	Weight 11.600	Internal Diameter 4.000	Set at 2428	Perforations 2384	To 2391
Tubing Size 2.375	Weight 4.700	Internal Diameter 1.995	Set at 2400	Perforations	To
Type Completion (Describe) Single Gas	Type Fluid Production water	Pump Unit or Traveling Plunger? pumping unit			
Producing Thru (Annulus/Tubing) casing	% Carbon Dioxide	% Nitrogen 37.397	Gas Gravity- Gg .799		
Vertical Depth (H) 2387	Pressure Taps Flange	Meter Run Size 2.067			
Pressure Buildup: Shut in	10/25/99 @ 10:15am	TAKEN	10/29/99 @ 3:30pm		
Well on Line: Started	10/29/99 @ 3:30pm	TAKEN	10/30/99 @ 3:05pm		

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 _t) (P _c)		Tubing WellHead Press. (P _w) (P _t) (P _c)		Duration (Hours)	Liquid Prod. Barrels
						psig	psia	psig	psia		
Shut-in						127	141			101.3	
Flow	.750	60.0	16.00	65		78	91			23.5	

FLOW STREAM ATTRIBUTES

COEFFICIENT (F _b) Mcf/d	(METER) PRESSURE psia	EXTENSION $\sqrt{P_m \times H_w}$	GRAVITY FACTOR Fg	FLOWING TEMP FACTOR Ft	DEVIATION FACTOR Fpv	RATE OF FLOW R Mcf/d	GOR	G _m
2.780	73.3	34.25	1.1187	.9952	1.0052	106		.799

(OPEN FLOW)(DELIVERABILITY) CALCULATIONS

$(P_c)^2 = 19.9$ $(P_w)^2 = 8.4$ 42.5 % $(P_c - 14.4) + 14.4 =$ $(P_a)^2 = 0.207$
 $(P_d)^2 = 3.60$

$(P_c)^2 - (P_a)^2$ or $(P_c)^2 - (P_d)^2$	$(P_c)^2 - (P_w)^2$	$\frac{[(P_c)^2 - (P_a)^2] \text{ or } [(P_c)^2 - (P_d)^2]}{[(P_c)^2 - (P_w)^2]}$	LOG	Backpressure Curve Slope "n" ---- or ---- Assigned Standard Slope	n x LOG	Antilog	Open Flow Deliverability = R x Antilog Mcf/d
19.73	11.54	1.710	.2329	.560	.1304	1.350	143
16.31	11.54	1.413	.1501	.560	.0841	1.214	129

OPEN FLOW 143 Mcfd @ 14.65 psia DELIVERABILITY 129 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 4 day of Nov, 19 99

Witness (if any)

For Commission

Original: Wichita
Copy : Dodge City
Copy: Horseshoe Operating

For Company

Checked by