

KANSAS CORPORATION COMMISSION
MULTIPOINT BACK PRESSURE TEST

FORM G-1
8-7-58

TYPE TEST: <input checked="" type="checkbox"/> Initial <input type="checkbox"/> Annual <input type="checkbox"/> Special		TEST DATE: 8/27/01			
COMPANY Horsehoe Operating Inc		LEASE Hill		WELL NO. #2	
COUNTY Hamilton	LOCATION C NW SW	SECTION 11-22s-40w	TWP RNG	ACRES 480	
FIELD Bradshaw	RESERVOIR Winfield	PIPELINE CONNECTION Duke			
COMPLETION DATE 2-5-01		PLUG BACK DEPTH TOTAL DEPTH		PACKER SET AT	
		2778 2779			
CASING SIZE 4.500	WT. 10.500	ID 4.090	SET AT 2779	PERF. 2745	TO 2754
TUBING SIZE 2.375	WT.	ID	SET AT 2761	PERF.	TO
TYPE COMPLETION (Describe) New Well Gas			TYPE FLUID PRODUCTION		
PRODUCING THRU (Annulus/Tubing) casing			RESERVOIR TEMPERATURE F 90		BAR PRESS - Pa 14.4 psia
GAS GRAVITY - Gg .754		% CARBON DIOXIDE .011	% NITROGEN 25.686		API GRAVITY OF LIQUID
VERTICAL DEPTH (H) 2750		TYPE METER CONN. flange		METER RUN SIZE 2.067	
REMARKS					

OBSERVED SURFACE DATA

RATE NO.	ORIFICE SIZE in.	(METER) PRESSURE psig	DIFF. (h _w) (h _t)	FLOWING TEMP. t.	WELLHEAD TEMP. t.	CASING WELLHEAD PRESS.		TUBING WELLHEAD PRESS.		DURATION HOURS	LIQUID PROD. Bbls.
						psig	(P _w) (P _t) (P _c) psia	psig	(P _w) (P _t) (P _c) psia		
SHUT-IN						218	232			72.50	
1.	.750	204.00	.90	91		204	218			.50	
2.	.750	191.00	1.51	89		191	205			.50	
3.	.750	184.00	2.59	88		184	198			.50	
4.	.750	166.00	5.92	86		166	180			.50	

FLOW STREAM ATTRIBUTES

RATE NO.	COEFFICIENT (F _b) Mcfd	(METER) PRESSURE psia	EXTENSION $\sqrt{P_m \times H_w}$	GRAVITY FACTOR Fg	FLOWING TEMP FACTOR Ft	DEVIATION FACTOR Fpv	RATE OF FLOW Q Mcfd	GOR	G _m
1.	2.779	218.4	14.02	1.1516	.9715	1.0145	44		.754
2.	2.779	205.4	17.61	1.1516	.9732	1.0138	55		.754
3.	2.779	198.4	22.67	1.1516	.9741	1.0134	71		.754
4.	2.779	180.4	32.68	1.1516	.9759	1.0123	103		.754

PRESSURE CALCULATION

RATE NO.	Pt psia	Pc psia	Pw psia	(Pc) ² Thousands	(Pw) ² Thousands	PLOTTING POINTS		% SHUT-IN 100 $\left[\frac{P_w - P_a}{P_c - P_a} \right]$
						(Pc) ² - (Pw) ² Thousands	Q Mcfd	
1.	218.4	232.4	218.4	54.0	47.7	6.3	44.2	93.6
2.	205.4	232.4	205.4	54.0	42.2	11.8	55.6	87.6
3.	198.4	232.4	198.4	54.0	39.4	14.6	71.6	84.4
4.	180.4	232.4	180.5	54.0	32.6	21.4	103.3	76.2

INDICATED WELLHEAD OPEN FLOW

269

Mcf @ 14.65 psia

"n" = 1.033

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 19 day of Sept, 2001

Witness (if any)

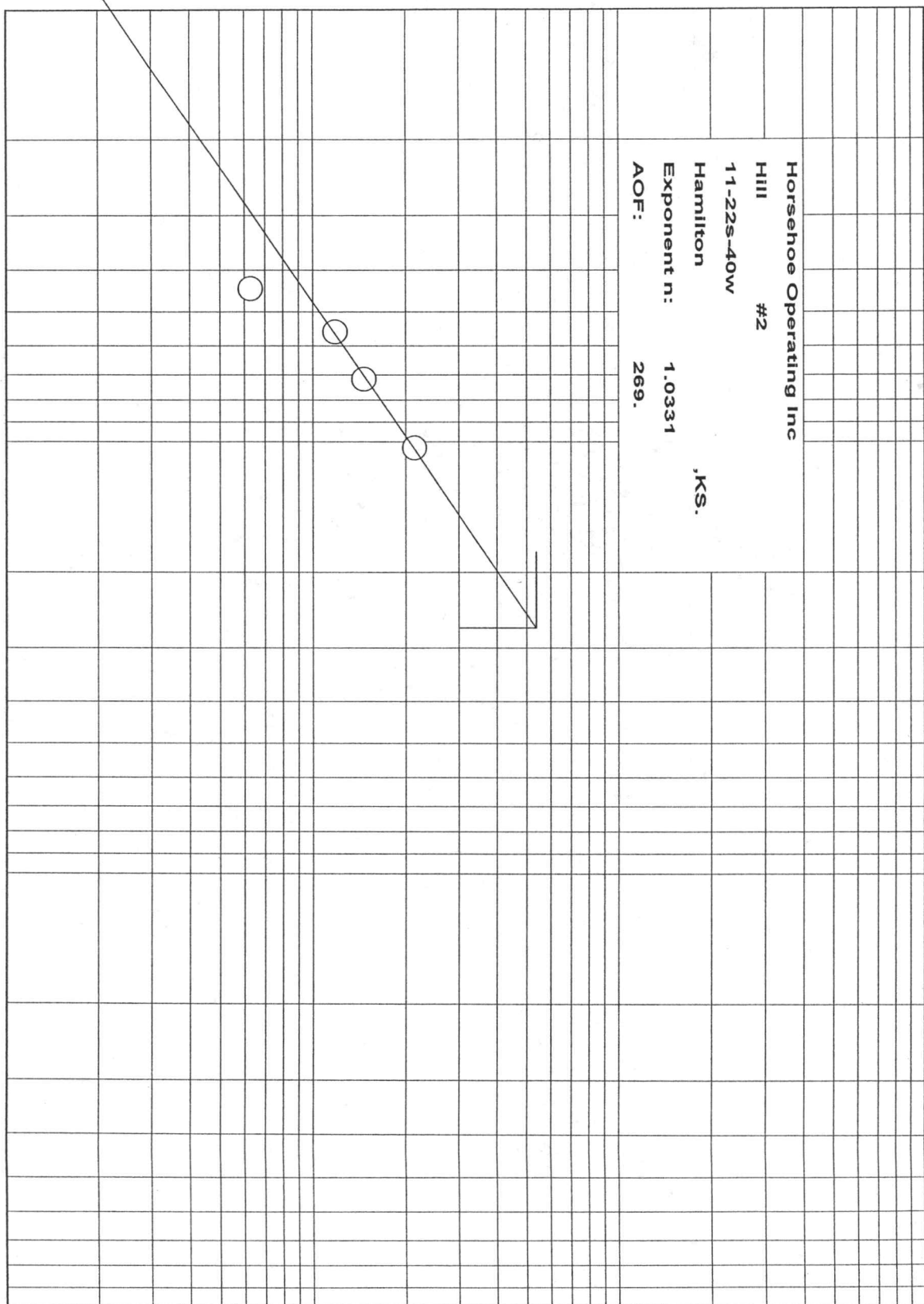
For Company

For Commission

Checked by

GAS WELL BACK PRESSURE CURVE

WELL TESTER: Trilobite Testing
 TEST DATE: 8/27/01



$P_c - P_w (10^2 \text{ PSI})$

100

10

1

10

100

1000

Q (MGF/DAY)

Company: *Horseshoe Operating Inc*
 Address: *500 w Texas Suite 1190 Midland, Tx 79701*
 Wellname: *Hill #2*

Legal: Sec: *11* Twp: *22* Rge: *40*

Formation: *winfield* Field/Pool: *Bradshaw* County: *Hamilton* St: *Ks*

Casing size: *4 1/2"* Feet of: Wt: Meter run size: SI: *218*

Tubing Size: *2"* Feet of: Wt: Orif (in): *.750* 95% *207*

TD: Plugged back depth: Packer depth: 90% *196*

Type Test: *4 point* Tap Type: Gravity: 85% *185*

Type Completion: Producing through: *Csg* 80% *174*

Date	Clk Tim	Tbg Pres	Csg Pres	Diff	Temp	Static/Prover	Wat Vol1	Oil Vol	Comment	
mm/dd	clock	psi	psi	in of H2O	F	PSI	inch	inch		
<i>8/27</i>	<i>12:15</i>	/	<i>218</i>	<i>.0</i>	<i>97°</i>	<i>218</i>	<i>7791</i>			
	<i>12:25</i>		<i>216</i>	<i>.0</i>	<i>94°</i>	<i>216</i>				
	<i>12:35</i>		<i>209</i>	<i>.0</i>	<i>94°</i>	<i>209</i>				
	<i>12:45</i>		<i>204</i>	<i>.90</i>	<i>91°</i>	<i>204</i>			<i>1st</i>	
	<i>12:55</i>		<i>200</i>	<i>1.57</i>	<i>91°</i>	<i>200</i>				
	<i>13:05</i>		<i>192</i>	<i>1.47</i>	<i>90°</i>	<i>192</i>				
	<i>13:15</i>		<i>191</i>	<i>1.51</i>	<i>89°</i>	<i>191</i>			<i>2nd</i>	
	<i>13:25</i>		<i>190</i>	<i>1.76</i>	<i>89°</i>	<i>190</i>				
	<i>13:35</i>		<i>185</i>	<i>2.57</i>	<i>89°</i>	<i>185</i>				
	<i>13:45</i>		<i>184</i>	<i>2.59</i>	<i>88°</i>	<i>184</i>			<i>3rd</i>	
	<i>13:55</i>		<i>171</i>	<i>3.30</i>	<i>86°</i>	<i>171</i>				
	<i>14:05</i>		<i>167</i>	<i>4.90</i>	<i>86°</i>	<i>167</i>				
<i>8/27</i>	<i>14:15</i>			<i>166</i>	<i>5.92</i>	<i>86°</i>	<i>166</i>			<i>4th left @ 194</i>
<i>8/28</i>	<i>10:05</i>			<i>198</i>	<i>.0</i>	<i>79°</i>	<i>198</i>	<i>7851</i>		<i>1-point</i>

Date	Miles	Name	Date	Miles	Name	Date	Miles	Name
<i>8/27</i>		<i>Shane</i>						
<i>8/28</i>		<i>Shane</i>						

4-point
1-point