

## HOBBS OFFICE OCC

Form C-122

## MULTI-POINT BACK PRESSURE TEST FOR GAS WELLS

Revised 12-1-55

Pool Kement Formation 1956 OCT 8 PM 2:22 County Lea  
Initial X Annual \_\_\_\_\_ Special \_\_\_\_\_ Date of Test 6-19-56  
Company The Texas Company Lease William Weir Well No. 1  
Unit B Sec. 25 Twp. 19-3 Rge. 34-E Purchaser Permian Basin Pipe Line Co.  
Casing 4 1/2 Wt. 9.5 I.D. 4.090 Set at 3800 Perf. 3550 To 3683  
Tubing 2 3/8 Wt. 4.70 I.D. 1.995 Set at 3760 Perf. 3756 To 3756  
Gas Pay: From 3550 To 3683 L 3550 xG .675 -GL 2396 Bar.Press. \_\_\_\_\_  
Producing Thru: Casing X Tubing \_\_\_\_\_ Type Well Dual G.O.  
Date of Completion: 11-19-54 Packer 3760 Single-Bradenhead-G. G. or G.O. Dual  
Reservoir Temp. \_\_\_\_\_

 $CO_2 = 1.77\%$   $H_2 = 1.91\%$ 

## OBSERVED DATA

Tested Through (Prover) (Choke) (Meter)Type Taps Pipe

No.	Flow Data					Tubing Data		Casing Data		Duration of Flow Hr.
	(Prover) (Line) Size	(Choke) (Orifice) Size	Press. psig	Diff. $h_w$	Temp. $^{\circ}F$ .	Press. psig	Temp. $^{\circ}F$ .	Press. psig	Temp. $^{\circ}F$ .	
SI										
1.	4	2.50	446.4	1.7	92			942.4		72 3/4
2.	4	2.50	435.2	1.6	74			913.7		24
3.	4	2.50	438.0	13.3	69			820.1		23 1/2
4.	4	2.50	444.9	28.2	70			810.8		24
5.								702.1		24

## FLOW CALCULATIONS

No.	Coefficient (24-Hour)	$\sqrt{h_{wpf}}$	Pressure psia	Flow Temp. Factor $F_t$	Gravity Factor $F_g$	Compress. Factor $F_{pv}$	Rate of Flow Q-MCFPD @ 15.025 psia
1.	54.44	28.23	469.6	.9706	.9427	1.041	1.465
2.	54.44	41.06	468.4	.9868	.9427	1.048	2.179
3.	54.44	79.16	471.2	.9915	.9427	1.050	4.229
4.	54.44	116.6	480.1	.9905	.9427	1.049	6.207
5.							

## PRESSURE CALCULATIONS

Gas Liquid Hydrocarbon Ratio \_\_\_\_\_ cf/bbl.  
Gravity of Liquid Hydrocarbons \_\_\_\_\_ deg.  
 $F_c = 1.912$   $(1-e^{-S}) = 0.152$

Specific Gravity Separator Gas \_\_\_\_\_  
Specific Gravity Flowing Fluid \_\_\_\_\_  
 $P_c = 955.6$   $P_c^2 = 913.2$

No.	$P_w$ $P_t$ (psia)	$P_t^2$	$F_c Q$	$(F_c Q)^2$	$(F_c Q)^2$ $(1-e^{-S})$	$P_w^2$	$P_c^2 - P_w^2$	Cal. $P_w$	$\frac{P_w}{P_c}$
1.	926.9	859.1	5.731	32.84	4.992	864.1	49.1	926.6	.97
2.	901.1	812.7	8.524	72.66	11.04	823.7	89.5	907.6	.96
3.	824.0	679.0	16.54	273.6	41.59	780.6	192.6	844.9	.86
4.	715.3	511.7	24.28	589.5	89.60	601.3	311.9	775.4	.75
5.									

Absolute Potential: 14,500 MCFPD; n .79

COMPANY The Texas Company  
ADDRESS Box 1570, Midland, Texas  
AGENT and TITLE L. I. Baker, District Gas Man  
WITNESSED H. E. Burrows  
COMPANY Permian Basin Pipe Line Company

REMARKS

## INSTRUCTIONS

This form is to be used for reporting multi-point back pressure tests on gas wells in the State, except those on which special orders are applicable. Three copies of this form and the back pressure curve shall be filed with the Commission at Box 871, Santa Fe.

The log log paper used for plotting the back pressure curve shall be of at least three inch cycles.

## NOMENCLATURE

$Q$  = Actual rate of flow at end of flow period at W. H. working pressure ( $P_w$ ).  
MCF/da. @ 15.025 psia and 60° F.

$P_c$  = 72 hour wellhead shut-in casing (or tubing) pressure whichever is greater.  
psia

$P_w$  = Static wellhead working pressure as determined at the end of flow period.  
(Casing if flowing thru tubing, tubing if flowing thru casing.) psia

$P_t$  = Flowing wellhead pressure (tubing if flowing through tubing, casing if  
flowing through casing.) psia

$P_f$  = Meter pressure, psia.

$h_w$  = Differential meter pressure, inches water.

$F_g$  = Gravity correction factor.

$F_t$  = Flowing temperature correction factor.

$F_{pv}$  = Supercompressibility factor.

$n$  = Slope of back pressure curve.

Note: If  $P_w$  cannot be taken because of manner of completion or condition of well, then  $P_w$  must be calculated by adding the pressure drop due to friction within the flow string to  $P_t$ .