

HOBBS OFFICE Form C-122  
1957 DEC 6 PM 3:57  
Revised 10-1-55

## MULTI-POINT BACK PRESSURE TEST FOR GAS WELLS

Pool Jalmat Formation Yates & 7 Rivers County Lea  
Initial \_\_\_\_\_ Annual \_\_\_\_\_ Special X Date of Test 4-24 to 4-28-57  
Company John M. Kelly Lease Hair Well No. 1  
Unit 1 Sec. 8 Twp. 24 Rge. 37 Purchaser El Paso Natural Gas  
Casing 7" Wt. 20# I.D. \_\_\_\_\_ Set at 2836 Perf. \_\_\_\_\_ To \_\_\_\_\_  
Tubing 2 3/8" Wt. 4.7# I.D. \_\_\_\_\_ Set at 3528 Perf. \_\_\_\_\_ To \_\_\_\_\_  
Gas Pay: From 2862 To 3054 L 2862 xG .650 -GL 1860 Bar.Press. 13.2  
Producing Thru: Casing X Tubing \_\_\_\_\_ Type Well G. O. Dual  
Single-Br lenhead-G. G. or G.O. Dual  
Date of Completion: 8-18-52 Packer 3145 Reservoir Temp. \_\_\_\_\_

## OBSERVED DATA

Tested Through (Pressure) (Globe) (Meter) Type Taps Flange

No.	Flow Data					Tubing Data		Casing Data		Duration of Flow Hr.
	( <del>Pressure</del> ) (Line) Size	( <del>Pressure</del> ) (Orifice) Size	Press. psig	Diff. h <sub>w</sub>	Temp. °F.	Press. psig	Temp. °F.	Press. psig	Temp. °F.	
SI								932		72
1.	4	1.750	522	14.81	70			785		24
2.	4	1.750	526	28.09	70			773		24
3.	4	1.750	518	37.21	71			744		24
4.	4	1.750	535	54.76	68			702		24
5.										

## FLOW CALCULATIONS

No.	Coefficient (24-Hour)	$\sqrt{h_{wpf}}$	Pressure psia	Flow Temp. Factor F <sub>t</sub>	Gravity Factor F <sub>g</sub>	Compress. Factor F <sub>pv</sub>	Rate of Flow Q-MCFPD @ 15.025 psia
1.	19.27	94.83		.9905	.9808	1.054	1833
2.	19.27	123.04		.9905	.9808	1.054	2371
3.	19.27	140.56		.9896	.9808	1.050	2214
4.	19.27	173.23		.9924	.9808	1.055	3354
5.							

## PRESSURE CALCULATIONS

Gas Liquid Hydrocarbon Ratio \_\_\_\_\_ cf/bbl.  
Gravity of Liquid Hydrocarbons \_\_\_\_\_ deg.  
F<sub>c</sub> .740 (1-e<sup>-s</sup>) 0.120  
Specific Gravity Separator Gas \_\_\_\_\_  
Specific Gravity Flowing Fluid \_\_\_\_\_  
P<sub>c</sub> 915.2 P<sub>c</sub><sup>2</sup> 837.6

No.	P <sub>x</sub> P <sub>t</sub> (psia)	P <sub>t</sub> <sup>2</sup>	F <sub>c</sub> Q	(F <sub>c</sub> Q) <sup>2</sup>	(F <sub>c</sub> Q) <sup>2</sup> (1-e <sup>-s</sup> )	P <sub>w</sub> <sup>2</sup>	P <sub>c</sub> <sup>2</sup> -P <sub>w</sub> <sup>2</sup>	Cal. P <sub>w</sub>	P <sub>w</sub> P <sub>c</sub>
1.	795.2	637.1	1.356	1.839	.221	637.3	200.3	798.3	.57
2.	786.2	618.1	1.760	3.098	.372	616.6	219.1	786.4	.66
3.	757.2	573.4	2.082	4.336	.520	573.9	263.7	757.6	.83
4.	715.2	511.5	2.482	6.160	.739	512.2	326.4	715.7	.75
5.									

Absolute Potential: 7,600 MCFPD; n .869  
COMPANY John M. Kelly  
ADDRESS Box 56714, Roswell, New Mexico  
AGENT and TITLE James W. Kelly Production Superintendent  
WITNESSED H. J. Perby  
COMPANY El Paso Natural Gas

REMARKS

ILLEGIBLE

## 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.
- $F_{pv}$  = Supercompressability 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  $P_t$ .