

## NEW MEXICO OIL CONSERVATION COMMISSION

HOBBS OFFICE OCC Form C-122  
Revised 12-1-55

## MULTI-POINT BACK PRESSURE TEST FOR GAS WELLS

Pool Jalmat Formation Yates County Lea Date of Test 1-28 to 2-1-57  
Initial \_\_\_\_\_ Annual \_\_\_\_\_ Special X  
Company El Paso Natural Gas Company Lease Jal "D" Well No. 3  
Unit B Sec. 8 Twp. 25 S Rge. 37 E Purchaser EPNG  
Casing 5 1/2 Wt. 15.5 I.D. \_\_\_\_\_ Set at 2930 Perf. \_\_\_\_\_ To \_\_\_\_\_  
Tubing 2 Wt. 4.7 I.D. \_\_\_\_\_ Set at 3032 Perf. \_\_\_\_\_ To \_\_\_\_\_  
Gas Pay: From 2839 To 3040 L 3032 xG .650 -GL 1971 Bar. Press. 13.2  
Producing Thru: Casing \_\_\_\_\_ Tubing X Type Well Single  
Single-Bradenhead-G. G. or G.O. Dual  
Date of Completion: 4-12-49 Packer None Reservoir Temp. \_\_\_\_\_

## OBSERVED DATA

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

No.	Flow Data					Tubing Data		Casing Data		Duration of Flow Hr.
	( <del>Pressure</del> ) (Line) Size	( <del>Orifice</del> ) (Orifice) Size	Press. psig	Diff. h <sub>w</sub>	Temp. °F.	Press. psig	Temp. °F.	Press. psig	Temp. °F.	
SI						574				72
1.	4	1.250	237	18.1	55	548				24
2.	4	1.250	242	26.0	65	542				24
3.	4	1.250	244	77.4	63	488				24
4.	4	1.250	238	96.0	64	473				24
5.										

## FLOW CALCULATIONS

No.	Coefficient Flange (24-Hour)	$\sqrt{h_w p_f}$	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.	9.643	67.20		1.0048	.9608	1.025	641
2.	9.643	81.44		.9952	.9608	1.024	769
3.	9.643	141.07		.9971	.9608	1.025	1336
4.	9.643	155.26		.9962	.9608	1.024	1467
5.							

## PRESSURE CALCULATIONS

Gas Liquid Hydrocarbon Ratio DRY cf/bbl.  
Gravity of Liquid Hydrocarbons \_\_\_\_\_ deg.  
F<sub>c</sub> 9.936 (1-e<sup>-s</sup>) 0.127

Specific Gravity Separator Gas .650  
Specific Gravity Flowing Fluid \_\_\_\_\_  
P<sub>c</sub> 587.2 P<sub>c</sub> 344.8

No.	<del>P<sub>max</sub></del> 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.	561.2	314.9	6.369	40.56	5.15	320.1	24.7	565.8	.95
2.	555.2	308.2	7.641	58.38	7.41	315.6	29.2	561.8	.94
3.	501.2	251.2	13.27	176.09	22.36	273.6	71.2	523.1	.85
4.	486.2	236.4	14.57	212.28	27.1	263.5	81.3	513.3	.82
5.									

Absolute Potential: 4,050 MCFPD; n .637

COMPANY El Paso Natural Gas Company  
ADDRESS P. O. Box 1384, Jal, New Mexico  
AGENT and TITLE R. T. Wright R. T. Wright - Petroleum Engineer  
WITNESSED H. H. Kerby  
COMPANY El Paso Natural Gas 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.

$F_{pv}$  = 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  $P_t$ .