

## NEW MEXICO OIL CONSERVATION COMMISSION

Form C-122

Revised 12-1-55

## MULTI-POINT BACK PRESSURE TEST FOR GAS WELLS

Pool Jalmat Formation Yates County LeaInitial \_\_\_\_\_ Annual X Special \_\_\_\_\_ Date of Test 3/1/57Company Three States Natural Gas Company Lease Stuart Well No. 1Unit M Sec. 10 Twp. 25S Rge. 37E Purchaser El Paso Natural Gas CompanyCasing 7" Wt. 24.0 I.D. \_\_\_\_\_ Set at 3168 Perf. \_\_\_\_\_ To \_\_\_\_\_Tubing 2 1/2" Wt. 6.5 I.D. \_\_\_\_\_ Set at 2836 Perf. \_\_\_\_\_ To \_\_\_\_\_Gas Pay: From 2943 To 2965 L 2836 xG 0.650 -GL 1843 Bar.Press. 13.2Producing Thru: Casing \_\_\_\_\_ Tubing X Type Well SingleDate of Completion: 11-30-55 Packer \_\_\_\_\_ Single-Bradenhead-G. G. or G.O. Dual  
Reservoir Temp. \_\_\_\_\_

## OBSERVED DATA

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

No.	Flow Data					Tubing Data		Casing Data		Duration of Flow Hr.
	(Prover) (Line) Size	(Orifice) (Orifice) Size	Press. psig	Diff. h <sub>w</sub>	Temp. °F.	Press. psig	Temp. °F.	Press. psig	Temp. °F.	
SI						612		612		72
1.	4	1.25	210	5.29	52	431		409		24
2.	4	1.25	215	5.76	54	390		405		24
3.	4	1.25	212	7.84	58	350		369		24
4.	4	1.25	215	12.96	62	229		260		24
5.										

## FLOW CALCULATIONS

No.	Coefficient FLG (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.	9.643	36.58	444.2	1.0078	.9608	1.027	351
2.	9.643	38.55	403.2	1.0058	.9608	1.027	369
3.	9.643	44.71	363.2	1.0019	.9608	1.026	426
4.	9.643	54.36	242.2	.9861	.9608	1.022	513
5.							

## PRESSURE CALCULATIONS

Gas Liquid Hydrocarbon Ratio Dry cf/bbl.  
Gravity of Liquid Hydrocarbons \_\_\_\_\_ deg.  
P<sub>c</sub> measured (1-e<sup>-s</sup>) \_\_\_\_\_Specific Gravity Separator Gas 0.650  
Specific Gravity Flowing Fluid \_\_\_\_\_  
P<sub>c</sub> 625.2 P<sub>c</sub> 390.9

No.	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.	444.2	197.3				213.6	177.3		
2.	403.2	162.6				174.9	216.0		
3.	363.2	131.9				146.1	244.8		
4.	242.2	58.7				74.6	316.3		
5.									

Absolute Potential: 590 MCFPD; n .671COMPANY Three States Natural Gas CompanyADDRESS Box 168 Jal, New MexicoAGENT and TITLE W. J. Fink Division Superintendent

WITNESSED \_\_\_\_\_

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  $P_t$ .