

## NEW MEXICO OIL CONSERVATION COMMISSION

Form C-122

Revised 12-1-55

## MULTI-POINT BACK PRESSURE TEST FOR GAS WELLS

Pool Jalnet Formation Iates County Lea  
Initial X Annual \_\_\_\_\_ Special X Date of Test 3-22-57  
Company Sinclair Oil & Gas Company Lease Jones Well No. 1  
Unit D Sec. 35 Twp. 22S Rge. 36E Purchaser El Paso Natural Gas Company  
Casing 9 Wt. 40 I.D. 8.150 Set at 3003 Perf. \_\_\_\_\_ To \_\_\_\_\_  
Tubing 2-1/2 Wt. 6.5 I.D. 2.441 Set at 3368 Perf. \_\_\_\_\_ To \_\_\_\_\_  
Gas Pay: From 3247 To 3317 L 3368 xG .655 -GL 2206 Bar.Press. 13.2  
Producing Thru: Casing \_\_\_\_\_ Tubing X Type Well Single  
Date of Completion: 5-10-36 Packer None Single-Bradenhead-G. G. or G.O. Dual  
Reservoir Temp. 108

## OBSERVED DATA

Tested Through (Prover) (Choke) (Meter)

Type Taps Flange

No.	Flow Data					Tubing Data		Casing Data		Duration of Flow Hr.
	(Prover) (Line) Size	(Choke) (Orifice) Size	Press. psig	Diff. h <sub>w</sub>	Temp. °F.	Press. psig	Temp. °F.	Press. psig	Temp. °F.	
SI						838	60			72
1.	4	1.250	535	7.3	73	763	60			24
2.	4	1.250	539	13.7	72	713	60			24
3.	4	1.250	538	23.0	71	693	60			24
4.	4	1.250	549	34.8	74	653	60			24
5.										

## FLOW CALCULATIONS

No.	Coefficient (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	63.20	548.2	.9877	.9571	1.034	607
2.	9.643	86.93	552.2	.9887	.9571	1.034	836
3.	9.643	112.87	551.2	.9896	.9571	1.034	1085
4.	9.643	139.87	562.2	.9868	.9571	1.034	1343
5.							

## PRESSURE CALCULATIONS

Gas Liquid Hydrocarbon Ratio - cf/bbl.  
Gravity of Liquid Hydrocarbons - deg.  
F<sub>c</sub> 5.866 (1-e<sup>-S</sup>) 0.141

Specific Gravity Separator Gas .655  
Specific Gravity Flowing Fluid -  
P<sub>c</sub> 851.2 P<sub>c</sub><sup>2</sup> 724.5

No.	P <sub>w</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.	776.2	602.5	3.56	12.67	1.8	604.3	120.2	777.4	91.3
2.	728.2	530.3	4.90	24.01	3.4	533.7	190.8	730.5	85.8
3.	708.2	501.5	6.36	40.44	5.7	507.2	217.3	712.2	83.7
4.	666.2	443.8	7.88	62.09	8.8	452.6	271.9	672.8	79.0
5.									

Absolute Potential: 3495 MCFPD; n .970COMPANY Sinclair Oil & Gas CompanyADDRESS 520 East Broadway - Hobbs, New MexicoAGENT and TITLE R. L. Harrod - Gas AnalystWITNESSED H. H. DarbyCOMPANY 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.

$F_{pv}$  = 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  $P_t$ .