

NEW MEXICO OIL CONSERVATION COMMISSION

Form C-122

Revised 12-1-55

MULTI-POINT BACK PRESSURE TEST FOR GAS WELLS

Pool Blanco Formation WasaVerde County San Juan  
 Initial Annual Special Work Over Date of Test 5/2/57  
 Company Anderson-Richard Lease Macdox Well No. 1  
 Unit N Sec. 17 Twp. 30 Rge. 8 Purchaser El Paso Natural Gas  
 Casing 7" Wt. 20 I.D. 5.456 Set at 4100 Perf.          To           
 Tubing 2 Wt. 4.70 I.D. 1.998 Set at 4730 Perf.          To           
 Gas Pay: From 4170 To 4734 L 4452 xG .675 -GL 3005 Bar.Press. 12.0  
 Producing Thru: Casing          Tubing X Type Well Single-Gas  
 Single-Bradenhead-G. G. or G.O. Dual  
 Date of Completion: Work Over Packer None Reservoir Temp.         

OBSERVED DATA

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

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
1.		<u>314</u>	<u>311</u>			<u>327</u>	<u>60</u>		
2.									
3.									
4.									
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.	<u>12.5650</u>		<u>325</u>	<u>1.000</u>	<u>.9427</u>	<u>1.035</u>	<u>3.897</u>
2.							
3.							
4.							
5.							

PRESSURE CALCULATIONS

Gas Liquid Hydrocarbon Ratio          cf/bbl.  
 Gravity of Liquid Hydrocarbons          deg.  
 F<sub>c</sub> 9.402 (1-e<sup>-s</sup>) .195  
 Specific Gravity Separator Gas           
 Specific Gravity Flowing Fluid           
 P<sub>c</sub> 939 P<sub>c</sub> 891.7

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.	<u>321</u>	<u>104.5</u>	<u>35.64</u>	<u>1249.5</u>	<u>855.1</u>	<u>367.4</u>	<u>814.3</u>	<u>606</u>	
2.									
3.									
4.									
5.									

Absolute Potential: 5,828 MCFPD; n .75

COMPANY           
 ADDRESS           
 AGENT and TITLE Sum Mathlin  
 WITNESSED Thurmond Macdox  
 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  $P_t$ .

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