

## NEW MEXICO OIL CONSERVATION COMMISSION

Form C-122

Revised 12-1-55

## MULTI-POINT BACK PRESSURE TEST FOR GAS WELLS

Pool Undesignated Formation Pictured Cliffs County Rio Arriba  
Initial X Annual - Special - Date of Test 9-1-58  
Company Magnolia Petroleum Company Lease McDaniel Unit Well No. 1  
Unit E Sec. 22 Twp. 24N Rge. 1W Purchase Transwestern Pipe Line  
Casing 5 1/2" Wt. 14 1/2 I.D. 5.012 Set at 3070 Perf. 2984 To 2996  
Tubing 2 3/8" Wt. 4.74 I.D. 1.995 Set at 2978' Perf. - To -  
Gas Pay: From 2984 To 2996 L 2978 xG .680 -GL 2025 Bar.Press. 12 psia (est)  
Producing Thru: Casing - Tubing X Type Well Single  
Single-Bradenhead-G. G. or G.O. Dual  
Date of Completion: 8-16-58 Packer No Reservoir Temp. -

## OBSERVED DATA

Tested Through (Proven) (Choke) (Water) Type Taps -

No.	Flow Data					Tubing Data		Casing Data		Duration of Flow Hr.
	(Proven) (Line) Size	(Choke) (Orifice) Size	Press. psig	Diff. h <sub>w</sub>	Temp. °F.	Press. psig	Temp. °F.	Press. psig	Temp. °F.	
SI						737		738		
1.	2"	3/4"	47		58	47	58	111	-	3 hrs.
2.										
3.										
4.										
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.	12.3650		59	1.0019	.9393	-	687
2.							
3.							
4.							
5.							

## PRESSURE CALCULATIONS

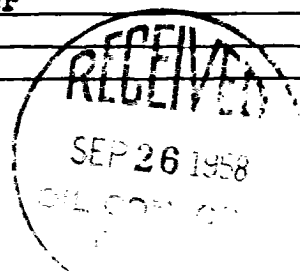
Gas Liquid Hydrocarbon Ratio - cf/bbl.  
Gravity of Liquid Hydrocarbons - deg.  
P<sub>c</sub> - (1-e<sup>-s</sup>)

Specific Gravity Separator Gas -  
Specific Gravity Flowing Fluid -  
P<sub>c</sub> 790 P<sub>c</sub> 562.5

No.	P <sub>w</sub> P <sub>w</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.	123					15.1	547.4		
2.									
3.									
4.									
5.									

Absolute Potential: 703 MCFPD; n .85  
COMPANY Magnolia Petroleum Company  
ADDRESS Box 2406, Hobbs, New Mexico  
AGENT and TITLE William A. Morgan Jr. Gas Engineer  
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.
- $F_{pv}$  = 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  $P_t$ .

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