

Corrected  
copy

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 1/20/58  
Company Magnolia Petroleum Company Lease Gardner Federal Well No. 1 P.C.  
Unit D Sec. 5 Twp. 23N Rge. 1W Purchaser No purchaser  
Casing 5 1/2 Wt. 11.4 I.D. 5.012" Set at 3470' Perf. 3376' To 3394'  
Tubing 2 3/8 Wt. 4.74 I.D. 1.995" Set at 3387' Perf. - To -  
Gas Pay: From 3376' To 3394' L 3387' x 0.680 est. -GL 2303 Bar. Press. est. 12 psi  
Producing Thru: Casing - Tubing x Type Well single  
Single-Bradenhead-G. G. or G.O. Dual  
Date of Completion: 1/7/58 Packer None Reservoir Temp. -

OBSERVED DATA

Tested Through (Promiser) (Choke) (Hobson) Type Taps -

No.	Flow Data					Tubing Data		Casing Data		Duration of Flow Hr.
	(Promiser) (Line) Size	(Choke) (Orifice) Size	Press. psig	Diff. h <sub>w</sub>	Temp. °F.	Press. psig	Temp. °F.	Press. psig	Temp. °F.	
SI						857	-	857	-	
1.	2"	0.750"	121	-	56	121	56	273	-	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.	12.365	-	133	1.0039	0.9393	1.014	1572
2.							
3.							
4.							
5.							

PRESSURE CALCULATIONS

Gas Liquid Hydrocarbon Ratio - cf/bbl.  
Gravity of Liquid Hydrocarbons None deg.  
F<sub>c</sub> (1-e<sup>-s</sup>)

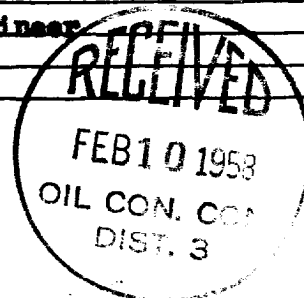
Specific Gravity Separator Gas -  
Specific Gravity Flowing Fluid 0.65 est.  
P<sub>c</sub> 869 P<sub>c</sub><sup>2</sup> 755

No.	P <sub>w</sub>	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.	285	-	-	-	-	81	874	-	-
2.									
3.									
4.									
5.									

Absolute Potential: 1731 MCFPD; n 0.85

COMPANY Magnolia Petroleum Company  
ADDRESS Box 2406, Hobbs, New Mexico  
AGENT and TITLE M. J. Thacker, Dist. 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  $P_t$ .

OIL CONSERVATION COMMISSION	
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