

## NEW MEXICO OIL CONSERVATION COMMISSION

Form C-122

Revised 12-1-55

ONE  
WELL-POINT BACK PRESSURE TEST FOR GAS WELLS

Pool Eumont Gas Formation Seven Rivers - Green County Lea  
Initial X Annual \_\_\_\_\_ Special \_\_\_\_\_ Date of Test 3-4-58  
Company The Ohio Oil Company Lease State McDonald A/c 2 Well No. 26  
Unit J Sec. 13 Twp. 22-S Rge. 36-E Purchaser Permian Basin Pipeline Company  
Casing 5 1/2" Wt. 15.5# I.D. 4.976" Set at 3784' Perf. \* To \_\_\_\_\_  
Tubing 2-3/8" Wt. 4.7# I.D. 1.995" Set at 3440' Perf. 3439' To 3440'  
Gas Pay: From 3186' To 3440' L 3439' xG 0.700 \*\*\* -GL 2407 Bar.Press. 13.2  
Producing Thru: Casing \_\_\_\_\_ Tubing X Type Well Single Completion  
Date of Completion: 2-28-58 Packer -- Single-Bradenhead-G. G. or G.O. Dual  
Reservoir Temp. --

## OBSERVED DATA

Tested Through (Prover) (~~ORIFICE~~) (~~NOZZLE~~)Type Taps --

No.	Flow Data					Tubing Data		Casing Data		Duration of Flow Hr.
	(Prover) (Inch) Size	(Orifice) (Inch) Size	Press. psig	Diff. h <sub>w</sub>	Temp. °F.	Press. psig	Temp. °F.	Press. psig	Temp. °F.	
SI						1174.3	39	1174.6	39	7 1/2 S.I.
1.	2"	7/8"	55.2	--	39	545.0	39	609.9	39	5-1/4 hrs
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.	16.7816	--	68.4	1.0208	0.9258	1.008	1093
2.							
3.							
4.							
5.							

## PRESSURE CALCULATIONS

Gas Liquid Hydrocarbon Ratio Dry Gas cf/bbl.  
Gravity of Liquid Hydrocarbons -- deg.  
P<sub>c</sub> P<sub>w</sub> Measured (1-e<sup>-8</sup>) --

Specific Gravity Separator Gas --  
Specific Gravity Flowing Fluid --  
P<sub>c</sub> 1187.8 P<sub>c</sub> 1410.9

No.	P <sub>w</sub> P <sub>t</sub> (psia)	P <sub>c</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>-8</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>v</sub>	P <sub>w</sub> / P <sub>c</sub>
1.	623.1					383.3	1022.6		0.52
2.									
3.									
4.									
5.									

Absolute Potential: 1410 MCFPD; n 0.772 \*\*\*COMPANY The Ohio Oil CompanyADDRESS Box 2107, Hobbs, New MexicoAGENT and TITLE Harrell D. Chiles - Petroleum EngineerEXAMINER Tested by J. B. Norton, Permian Basin P.L. Co. - Witnessed by J. R. Barber,REMARKS The Ohio Oil Company

## REMARKS

\* 5 1/2" cas perfs: 3186-3240, 3252-64, 3274-86, 3360-70, &amp; 3410-40

\*\* Gravity of gas obtained by taking average of Eumont gas gravities of wells nearest this well.

\*\*\* Average Eumont Gas Pool Slope of 0.772 was used to plot &amp; calculate the absolute potential.

## 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  $P_t$ .