

## NEW MEXICO OIL CONSERVATION COMMISSION

HOBBS OFFICE CCC

Form C-122

Revised 12-1-55

## MULTI-POINT BACK PRESSURE TEST FOR GAS WELLS

Pool Jalnet Gas Pool Formation Yates & Seven Rivers County LeaInitial \_\_\_\_\_ Annual X Special \_\_\_\_\_ Date of Test 1/25 thru 2/1/57Company The Ohio Oil Company Lease State McDonald A/c 1 Well No. 6Unit N Sec. 16 Twp. 22-S Rge. 36-E Purchaser Permian Basin Pipeline CompanyCasing 7" Wt. 24# I.D. 6.336 Set at 3657' Perf. \* To \_\_\_\_\_Tubing 2-7/8" Wt. 6.5 I.D. 2.441 Set at 3488 Perf. 3468 To 3471Gas Pay: From 3058 To 3530 L 3468 xG 0.660 -GL 2289 Bar.Press. 13.2Producing Thru: Casing \_\_\_\_\_ Tubing X Type Well SingleDate of Completion: 10-21-54 Packer 2987-2990 Single-Bradenhead-G. G. or G.O. Dual  
Reservoir Temp. --

## OBSERVED DATA

Tested Through (Runner) (Choke) (Meter) Type Taps Pipe

Flow Data						Tubing Data		Casing Data		Duration of Flow Hr.
No.	( <del>Runner</del> ) (Line) Size	( <del>Choke</del> ) (Orifice) Size	Press. psig	Diff. h <sub>w</sub>	Temp. °F.	Press. psig	Temp. °F.	Press. psig	Temp. °F.	
SI						764	--	Pkr.	--	72 Hr. S.I.
1.	4"	1.750	622	2.65	102	746	--	"	--	24 hr.
2.	4"	1.750	592	9.90	96	722	--	"	--	24 hr.
3.	4"	1.750	587	16.53	94	703	--	"	--	24 hr.
4.	4"	1.750	567.3	42.32	89	649	--	"	--	24 hr.
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.	21.69	41.03	635.2	0.9618	0.9535	1.051	858
2.	21.69	77.40	605.2	0.9671	0.9535	1.052	1629
3.	21.69	99.61	600.2	0.9688	0.9535	1.051	2097
4.	21.69	156.74	580.5	0.9732	0.9535	1.052	3319
5.							

## PRESSURE CALCULATIONS

Gas Liquid Hydrocarbon Ratio Dry Gas cf/bbl.  
Gravity of Liquid Hydrocarbons -- deg.  
F<sub>c</sub> 5.866 (1-e<sup>-s</sup>) 0.146Specific Gravity Separator Gas --  
Specific Gravity Flowing Fluid --  
P<sub>c</sub> 777.2 P<sub>c</sub> 604.0

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.	759.2	576.4	5.033	25.33	3.7	580.1	23.9	761.6	98.0
2.	735.2	540.5	9.556	91.32	13.3	553.8	50.2	744.2	95.8
3.	716.2	512.9	12.301	151.31	22.1	535.0	69.0	731.4	94.1
4.	662.2	438.5	19.469	379.04	55.3	493.8	110.2	702.7	90.4
5.									

Absolute Potential: 15,250 MCFPD; n 0.895974COMPANY The Ohio Oil CompanyADDRESS P. O. Box 2107, Hobbs, New MexicoAGENT and TITLE H. D. Chiles - Petroleum Engineer *H. D. Chiles*WITNESSED Mr. P. N. RandolphCOMPANY El Paso Natural Gas Company

## REMARKS

\* 7" O.D. csg. perfs as follows:

3058-3143', 3158-3221', 3240-3266', 3322-3344',  
3362-3380', 3426-3456', & 3474-3530'ELVIS A. UTZ  
GAS ENGINEER

## 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  $P_t$ .