

MULTI-POINT BACK PRESSURE TEST FOR GAS WELLS

Pool Bumont Formation Queen County Lea
 Initial _____ Annual X Special _____ Date of Test 6/18 thru 6/26/56
 Company The Ohio Oil Company Lease Bertha Barber Well No. 11
 Unit D Sec. 5 Twp. 20-S Rge. 37-E Purchaser Permian Basin Pipeline Co.
 Casing 5 1/2 Wt. 15.5 I.D. 4.950 Set at 5752 Perf. * To _____
 Tubing 2.375 Wt. 4.7 I.D. 1.995 Set at 3522 Perf. 3508 To 3511
 Gas Pay: From 3280 To 3506 L 3508 xG 0.675 -GL 2368 Bar.Press. 13.2
 Producing Thru: Casing _____ Tubing X Type Well Single
 Date of Completion: 11/8/52 Packer None Single-Bradenhead-G. G. or G.O. Dual
 Reservoir Temp. _____

OBSERVED DATA

Tested Through (Packer) (Choke) (Meter)										Type Taps	Pipe
Flow Data					Tubing Data		Casing Data		Duration of Flow Hr.		
No.	(Prover) (Line) Size	(Choke) (Orifice) Size	Press. psig	Diff. h _w	Temp. °F.	Press. psig	Temp. °F.	Press. psig	Temp. °F.		
SI	1"	2.25"	---	---	---	916.1	94	995.9	94	71-3/4 hr	S.I.
1.	1"	2.25"	454.8	11.6	94	862.1	94	910.0	94	24-1/4 hr.	
2.	1"	2.25"	454.2	21.8	89	764.8	94	863.4	94	23-3/4 hr.	
3.	1"	2.25"	459.4	35.8	78	606.6	94	808.2	94	24 hr.	
4.	1"	2.25"	454.2	36.2	77	600.6	94	803.6	94	24 hr.	
5.											

FLOW CALCULATIONS

No.	Coefficient (24-Hour)	$\sqrt{h_w p_f}$	Pressure psia	Flow Temp. Factor F _t	Gravity Factor F _g	Compress. Factor F _{pv}	Rate of Flow Q-MCFPD @ 15.025 psia
1.	40.53	73.68	468.0	0.9688	0.9427	1.041	2,839
2.	"	100.94	467.4	0.9732	0.9427	1.043	3,915
3.	"	130.07	472.6	0.9831	0.9427	1.046	5,111
4.	"	130.08	467.4	0.9840	0.9427	1.046	5,116
5.							

PRESSURE CALCULATIONS

Gas Liquid Hydrocarbon Ratio Dry Gas cf/bbl.
 Gravity of Liquid Hydrocarbons _____ deg.
 F_c Per Measured (1-e^{-s}) _____
 Specific Gravity Separator Gas _____
 Specific Gravity Flowing Fluid _____
 P_c 1009.1 P_c² 1,018.3

No.	P _w P _t (psia)	P _t ²	F _c Q	(F _c Q) ²	(F _c Q) ² (1-e ^{-s})	P _w ²	P _c ² -P _w ²	Cal. P _w	P _w /F _c
1.	923.2					852.3	166.0		91.5
2.	876.6					768.4	249.9		86.9
3.	821.4					674.7	343.6		81.4
4.	816.8					667.2	351.1		80.9
5.									

Absolute Potential: 12,450 MCFPD; n 0.818887

COMPANY The Ohio Oil Company
 ADDRESS P. O. Box 2107, Hobbs, New Mexico
 AGENT and TITLE Thomas O. Webb - Petroleum Engineer
 WITNESSED Mr. R. L. West
 COMPANY Permian Basin Pipeline Company

REMARKS

* 5 1/2" O.D. casing perf. as follows: 3364-3376, 3385-3402, 3411-3474, & 3496-3506

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 .