

MULTI-POINT BACK PRESSURE TEST FOR GAS WELLS

Pool Eumont Gas Formation Queen County Lea JAN 9 53
Initial X Annual _____ Special _____ Date of Test 5-14 thru 5-15, 59
Company The Ohio Oil Company Lease C. J. Saunders Well No. 1
Unit C Sec. 1 Twp. 22-S Rge. 36-E Purchaser Permian Basin Pipeline Company
Casing *3.5" Wt. 9.3# I.D. 2.992 Set at 3628' Perf. 3378-3405 & 3416-3454'
Tubing 1.25" Wt. 2.4# I.D. 1.380 Set at 3396' Perf. 3393' To 3395'
Gas Pay: From 3378' To 3454' L 3378 xG 0.095 -GL 2348 Bar.Press. 13.2
Producing Thru: Casing *3.5" Tubing _____ Type Well Single
Single-Bradenhead-G. G. or G.O. Dual
Date of Completion: 8-19-57 Packer -- Reservoir Temp. --

OBSERVED DATA

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

No.	Flow Data					Tubing Data		Casing Data		Duration of Flow Hr.
	(Prover) (Line) Size	(Choke) (Orifice) Size	Press. psig	Diff. h _w	Temp. °F.	Press. psig	Temp. °F.	Press. psig	Temp. °F.	
SI						969.6	-	969.6	-	70.5 Hr. SI
1.	4"	1.75	354.6	6.1	62	930.3	-	923.4	65	3 Hrs.
2.	4"	1.75	369.6	14.0	60	885.6	-	870.9	71	3 "
3.	4"	1.75	377.2	25.0	61	826.4	-	799.1	72	3 "
4.	4"	1.75	380.8	41.4	62	739.3	-	683.4	73	3 "
5.	4"	1.75	352.1	37.4	65	680.7	-	625.4	73	24 "

FLOW CALCULATIONS

No.	Coefficient (24-Hour)	$\sqrt{h_{wpf}}$	Pressure psia	Flow Temp. Factor F _t	Gravity Factor F _g	Compress. Factor F _{pv}	Rate of Flow Q-MCFPD @ 15.025 psia
1.	21.69	47.37	367.8	0.9981	.9292	1.038	989
2.	21.69	73.21	382.8	1.0000	.9292	1.039	1533
3.	21.69	98.79	390.4	0.9990	.9292	1.040	2069
4.	21.69	127.7	394.0	0.9981	.9292	1.041	2674
5.	21.69	116.9	365.3	0.9952	.9292	1.037	2431

PRESSURE CALCULATIONS

as Liquid Hydrocarbon Ratio Dry Gas cf/bbl.
Gravity of Liquid Hydrocarbons _____ deg.
c P_w measured (1-e^{-s}) _____

*N₂ .61%
S₂ .517%*
Specific Gravity Separator Gas _____
Specific Gravity Flowing Fluid _____
P_c 982.8 P_c 965.9

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 /P _c
1.						890.2	75.71		96.00
2.						807.8	158.1		91.45
3.						704.9	261.0		85.43
4.						566.3	399.6		76.57
5.						481.5	484.4		70.60

Absolute Potential: 3676 MCFPD; n 0.599

COMPANY The Ohio Oil Company

ADDRESS Box 2107, Hobbs, New Mexico

AGENT and TITLE Robert L. McLean, Petroleum Engineer Robert L. McLean

WITNESSED Test Conducted by: Mr. R. L. West - Permian Basin Pipeline Company

COMPANY Witnessed by: R. L. McLean

REMARKS

* 3 1/2" O.D. tubing set @ 3628 and cemented w/225 sx. cement.

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 .