

MAR 7 1962

Revised 12-1-55

MULTI-POINT BACK PRESSURE TEST FOR GAS WELLS

Pool Atoka Penn Formation Pennsylvanian County ARTESIA, OFFICE Eddy
Initial X Annual PM 1:29 Special _____ Date of Test 2-15-62
Company Martin, Williams & Judson Lease Hondo LFE Well No. 1
Unit P Sec. 19 Twp. 18S Rge. 26E Purchaser None - Gas vented for test
Casing 4 1/2 Wt. 11.60 I.D. 4.000 Set at 9124 Perf. 8990-9020 T& 9056-9069
Tubing 2 Wt. 4.7 I.D. 1.995 Set at 9072 Perf. 9026 To 9028
Gas Pay: From 8992 To 9069 L 9026 xGmix 0.693 GL 6255 Bar.Press. 13.2
Producing Thru: Casing _____ Tubing X Type Well single
Date of Completion: 2-2-62 Packer 8937 Single-Bradenhead-G. G. or G.O. Dual
Reservoir Temp. 157° F

OBSERVED DATA

Tested Through (~~Pressure~~) (~~Orifice~~) (Meter)Type Taps Flange

No.	Flow Data					Tubing Data		Casing Data		Duration of Flow Hr.
	(Pressure) (Line) Size	(Orifice) (Orifice) Size	Press. psig	Diff. h _w	Temp. °F.	Press. psig	Temp. °F.	Press. psig	Temp. °F.	
*SI						* 2685	* 80	packer	-	* 76 hr
1.	3	1 1/2	815	6.5	100	2594	78	packer	-	22 hr
2.	3	1-1/4	860	40.5	116	2527	78	packer	-	2 hr
3.	3	1-1/4	880	63.5	108	2451	78	packer	-	2 hr
4.	3	1 1/2	850	53.5	92	2376	78	packer	-	1 1/2 hr
5.										

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.	14.360	73.36	828.2	0.9636	0.9608	1.061	1035
2.	9.781	188.03	873.2	0.9501	0.9608	1.063	1789
3.	9.781	238.13	893.2	0.9568	0.9608	1.066	2283
4.	14.360	214.87	863.2	0.9706	0.9608	1.078	3102
5.							

PRESSURE CALCULATIONS

Gas Liquid Hydrocarbon Ratio 64.688 cf/bbl.
Gravity of Liquid Hydrocarbons 53 deg.
F_c 9.936 (1-e^{-s}) 0.350

Specific Gravity Separator Gas 0.650
Specific Gravity Flowing Fluid 0.693
P_c 2698.2 P_c² 7280.3

No.	X _x 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.	2607.2	6797.5	10.28	105.7	37.0	6834.5	445.8	2614.3	0.9689
2.	2540.2	6452.6	17.74	314.7	110.2	6562.8	717.5	2561.8	0.9494
3.	2464.2	6072.3	22.68	514.4	180.0	6252.3	1028.0	2500.5	0.9267
4.	2389.2	5708.3	30.82	949.9	332.5	6040.8	1239.5	2457.8	0.9109
5.									

Absolute Potential: 16,000 MCFPD; n 0.97256
COMPANY Martin, Williams & Judson
ADDRESS 413 First National Bank Bldg., Midland, Texas
AGENT and TITLE R. Ken Williams, Partner
WITNESSED Jim Holcomb
COMPANY Martin, Williams & Judson

REMARKS

On 22 hr. flow rate recovered liquid equivalent of 16 BPD. All flow rates stabilized for one hour or more. Maximum flow rate for draw down of 30% was not reached because of test equipment limitation.

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 .

U. S. G. S.
TRANSPORTER