

MULTI-POINT BACK PRESSURE TEST FOR GAS WELLS

Pool Wildcat Formation Atoka MS OCT 22 AM 10:21 County EddyInitial X Annual _____ Special _____ Date of Test 10-15-56Company El Paso Natural Gas Company Lease Welch Unit Well No. 1 - XUnit D Sec. 21 Twp. 26 S Rge. 27 E Purchaser El Paso Natural Gas CompanyCasing 7 Wt. 32 I.D. 6.094 Set at 12,614 Perf. 12,502 To 12,522Tubing 2-1/2 Wt. 6.5 I.D. 2.441 Set at 12,531 Perf. 12,519 To 12,531Gas Pay: From 12,502 To 12,522 L 12,519 xG .577 -GL _____ Bar.Press. 13.2Producing Thru: Casing _____ Tubing X Type Well SingleDate of Completion: 10-15-56 Packer None Single-Bradenhead-G. G. or G.O. Dual Reservoir Temp. 180°F

OBSERVED DATA

Tested Through (~~22.000~~) (~~22.000~~) (Meter) Type Taps Flange

No.	Flow Data			Tubing Data		Casing Data		Duration of Flow Hr.
	(22.000) (Line) Size	(22.000) (Orifice) Size	Press. psig	Diff. h _w	Temp. °F.	Press. psig	Temp. °F.	
SI								
1.	6	3.000	794	62.41	71	3297	3313	96
2.	6	3.000	790	45.29	58	1479	2285	15 hr 45 min
3.	6	3.000	781	22.56	60	1966	2449	2 hr 25 min
4.	6	3.000	762	4.84	73	2511	2719	3 hr
5.						2971	3022	18 hr

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.	57.46	224.42		.9896	1.0215	1.058	13,791
2.	57.46	190.71		1.0019	1.0215	1.065	11,944
3.	57.46	133.85		1.0000	1.0215	1.059	8,320
4.	57.46	61.25		.9877	1.0215	1.056	3,750
5.							

PRESSURE CALCULATIONS

Gas Liquid Hydrocarbon Ratio Dry cf/bbl.
Gravity of Liquid Hydrocarbons _____ deg.
F_c _____ (1-e^{-s})Specific Gravity Separator Gas _____
Specific Gravity Flowing Fluid _____
P_c 3326.2 P_c² 11,063.6

No.	P _w (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.	2298.2					5281.7	5781.9		.6909
2.	2462.2					6062.4	5001.2		.7402
3.	2732.2					7464.9	3598.7		.8214
4.	3035.2					9212.4	1851.2		.9125
5.									

Absolute Potential: 27,000 MCFPD; n 1.000COMPANY El Paso Natural Gas CompanyADDRESS P. O. Box 1384; Jal, New MexicoAGENT and TITLE R. T. Wright R. T. Wright - Petroleum EngineerWITNESSED Edward MabeCOMPANY El Paso Natural Gas Company

REMARKS

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 .