

MULTI-POINT BACK PRESSURE TEST FOR GAS WELL

Revised 12-1-55

Pool Crosby-Devonian Formation Devonian County Lea
Initial X Annual _____ Special _____ Date of Test 8-21/8-28-59
Company Pan American Petroleum Corp. Lease Farnsworth "C" Well No. 7
Unit 0 Sec. 4 Twp. 26-S Rge. 37-E Purchaser El Paso Natural Gas Company
Casing 5-1/2 Wt. 15.0# I.D. 4.950 Set at 8985 Perf. 8815 To 8840
Tubing 2-3/8 Wt. 4.7 I.D. 1.995 Set at 8680 Perf. Open end To _____
Gas Pay: From 8713 To 8950 L 8680 xG 0.652 -GL 5659 Bar.Press. 13.2
Producing Thru: Casing _____ Tubing X Type Well Single
Date of Completion: 2-26-59 Packer None Reservoir Temp. _____

OBSERVED DATA

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

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						2758				72
1.	6"	2.500"	540	1.00	90	2742				24
2.	6"	2.500"	538	10.89	78	2709				24
3.	6"	2.500"	556	25.00	74	2637				24
4.	6"	2.500"	560	40.96	80	2549				24
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.	39.13	23.52	553.2	0.9723	0.9593	1.048	899.6
2.	39.13	77.48	551.2	0.9831	0.9593	1.053	3012
3.	39.13	119.3	569.2	0.9868	0.9593	1.057	4671
4.	39.13	153.2	573.2	0.9813	0.9593	1.053	5943
5.							

PRESSURE CALCULATIONS

Gas Liquid Hydrocarbon Ratio _____ cf/bbl.
Gravity of Liquid Hydrocarbons _____ deg.
P_c 9.936 (1-e^{-S}) 0.323
Specific Gravity Separator Gas 0.652
Specific Gravity Flowing Fluid _____
P_c 2771.2 P_c 7679

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	$\frac{P_w}{P_c} \frac{P_w}{P_c}$	Cal. P _w	$\frac{P_w}{P_c} \frac{P_w}{P_c}$
1.	2755.2	7591	8.938	79.89	25.80	7617	88		974
2.	2722.2	7410	29.93	895.8	289.3	7699	289		184
3.	2650.2	7024	44.41	2154.	695.7	7720	655		950
4.	2562.2	6565	59.05	3487.	1126	7691	1136		725
5.									

Wellhead Absolute Potential: 14,150 MCFPD; n 0.4536
COMPANY Pan American Petroleum Corporation
ADDRESS P. O. Box 68 - Hobbs, New Mexico
AGENT and TITLE _____ Original Signed by Area Superintendent
WITNESSED Bobby G. Bous J.W. BROWN
COMPANY El Paso Natural Gas Company

REMARKS

Second complete test - unable to calculate absolute potential due to P_w² being greater than P_c² on both tests.
Unable to obtain GOR for (1-e^{-S}) calculations.
Disregard first point due to fluid accumulation in well bore.

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 .

Company - Pan American Petroleum Corporation
 Well - Farnsworth "C" No.
 Location - Unit "C", Section 4, T-26-S, R-37-E
 County - Lea
 Date - 8-21/8-28-59

