

NEW MEXICO OIL CONSERVATION COMMISSION

A. UIZ
GAS ENGINEER
W. H. Baker

HOBBS OFFICE OCC

Form C-122

MULTI-POINT BACK PRESSURE TEST FOR GAS WELLS

Revised 12-1-55

Pool Eumont Formation Queens 1956 OCT 8 PM 2:22 County Lea
Initial X Annual _____ Special _____ Date of Test 6-28-56
Company The Texas Company Lease State of N.M. "H" NCT-4 Well No. 27
Unit L Sec. 19 Twp. 20-8 Rge. 37-E Purchaser Permian Basin Pipe Line Co.
Casing 5 1/2 Wt. 14 1/2 I.D. 5.012 Set at 3355 Perf. _____ To _____
Tubing 2 3/8 Wt. 4.70 I.D. 1.995 Set at 3348 Perf. 3338 To 3341
Gas Pay: From 3355 To 3550 L 3338 xG 0.670 -GL 2236 Bar. Press. _____
Producing Thru: Casing _____ Tubing X Type Well Single
Single-Bradenhead-G. G. or G.O. Dual
Date of Completion: 4-7-54 Packer _____ Reservoir Temp. _____

OBSERVED DATA

 $CO_2 = 1.75\%$ $H_2 = 1.17\%$ Tested Through (Revers) (Choke) (Meter)Type Taps Pipe

Flow Data						Tubing Data		Casing Data		Duration of Flow Hr.
No.	(Pressure) (Line) Size	(Choke) (Orifice) Size	Press.	Diff.	Temp.	Press.	Temp.	Press.	Temp.	
			psig	h _w	°F.	psig	°F.	psig	°F.	
SI						944.3		945.2		7 3/4
1.	4	2.25	457.6	3.9	68	843.5		860.6		23 3/4
2.	4	2.25	461.2	8.8	66	751.7		795.0		24
3.	4	2.25	463.6	15.0	70	631.3		727.3		24
4.	4	2.25	470.9	18.4	68	508.9		643.1		23 3/4
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	42.85	470.8	.9924	.9463	1.050	1,713
2.	40.53	64.61	474.4	.9943	.9463	1.051	2,590
3.	40.53	84.57	476.8	.9905	.9463	1.049	3,370
4.	40.53	94.38	484.1	.9924	.9463	1.052	3,779
5.							

PRESSURE CALCULATIONS

Gas Liquid Hydrocarbon Ratio _____ cf/bbl.
Gravity of Liquid Hydrocarbons _____ deg.
 F_c _____ $(1-e^{-s})$

Specific Gravity Separator Gas _____
Specific Gravity Flowing Fluid _____
 P_c 958.4 P_c^2 916.5

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	$\frac{P_w}{P_c}$
1.	873.8					763.5	155.0		.91
2.	808.2					653.2	265.3		.84
3.	740.5					548.3	370.2		.77
4.	696.3					484.8	433.7		.73
5.									

Absolute Potential: 6,595 MCFPD; n .74

COMPANY The Texas Company
ADDRESS Box 1270, Midland, Texas
AGENT and TITLE L. I. Baker, District Gas Man
WITNESSED H. E. Barrett
COMPANY Permian Basin Pipe Line 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} = 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 .