

NEW MEXICO OIL CONSERVATION COMMISSION

HOBBS OFFICE OCC

Form C-122

Revised 12-1-55

MULTI-POINT BACK PRESSURE TEST FOR GAS WELLS

Pool Summit Formation Seven Rivers County Lea
Initial X Annual _____ Special _____ Date of Test 10-2-56
Company The Texas Company Lease J. K. Reeter Well No. 4
Unit 0 Sec. 30 Twp. 21-S Rge. 36-E Purchaser El Paso Natural Gas Company
Casing 7" Wt. 24.4 I.D. 6.456 Set at 3007 Perf. 3490 To 3565
Tubing 2 3/8" Wt. 4.70 I.D. 1.99 Set at 3562 Perf. _____ To _____
Gas Pay: From 3490 To 3565 L 3562 xG .690 -GL 2458 Bar.Press. 13.2
Producing Thru: Casing _____ Tubing X Type Well Single
Date of Completion: 4-24-51 Packer 3246 Single-Bradenhead-G. G. or G.O. Dual
Reservoir Temp. _____

OBSERVED DATA

Tested Through (Prover) (~~Choke~~) (~~Motor~~) 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						618				72
1.	2	.500	458		73	458				1
2.	2	.625	350		71	350				1
3.	2	.750	272		70	272				1
4.	2	.875	204		68	204				1
5.	2	.875	209		67	209				24

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.	5.5233		471.2	.9877	.9125	1.042	2.621
2.	8.3353		363.2	.9896	.9125	1.040	2.912
3.	12.2023		283.2	.9903	.9125	1.030	3.311
4.	16.7816		219.2	.9924	.9125	1.023	3.682
5.	16.7816		222.2	.9933	.9125	1.023	3.511

PRESSURE CALCULATIONS

Gas Liquid Hydrocarbon Ratio _____ cf/bbl.
Gravity of Liquid Hydrocarbons _____ deg.
F_c 9.936 (1-e^{-s}) 0.156

Specific Gravity Separator Gas _____
Specific Gravity Flowing Fluid _____
P_c 631.2 P_c 396.4

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.	471.2	222.0	21.04	442.5	97.9	319.9	78.5	545.6	.75
2.	363.2	131.9	24.91	620.5	130.6	242.3	135.9	512.3	.58
3.	283.2	81.3	32.90	1082.4	162.9	250.2	142.2	500.2	.45
4.	219.2	48.0	34.60	1197.2	186.2	234.2	163.6	484.6	.35
5.	222.2	49.4	35.10	1232.0	192.2	241.6	156.2	491.5	.35

Absolute Potential: 5.760 MCFPD; n .5
COMPANY THE TEXAS COMPANY
ADDRESS BOX 1270, MIDLAND, TEXAS
AGENT and TITLE L. I. BAKER, DISTRICT GAS MAN
WITNESSED EARL SMITH
COMPANY EL PASO NATURAL GAS COMPANY

REMARKS

This is a retest. Due to the back pressure curve being too steep, a curve of 63° was drawn thru the smallest rate of flow as required by the Multi-Point Back Pressure Test Manual.

ELVIS A. ULL
GAS ENGINEER

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 .