

NEW MEXICO OIL CONSERVATION COMMISSION

Form C-122

Revised 12-1-55

MULTI-POINT BACK PRESSURE TEST FOR GAS WELLS

Pool Jalmat Formation Yates County Lea
Initial X Annual _____ Special _____ Date of Test 7-20, 21-61
Company TEXACO Inc. Lease E. D. Fanning Well No. 7
Unit 4 Sec. 5 Twp. 24-S Rge. 37-E Purchaser None
Casing 4-1/2 Wt. 9.50 I.D. _____ Set at 3687 Perf. 3064 To 3100
Tubing 2-3/8 Wt. 4.7 I.D. 1.995 Set at 3007 Perf. _____ To _____
Gas Pay: From 3064 To 3100 L 3064 3007 1954 650 -GL 1992 Bar.Press. 13.2
Producing Thru: Casing _____ Tubing X Type Well Single - Gas
Single-Bradenhead-G. G. or G.O. Dual
Date of Completion: 7-21-61 Packer None Reservoir Temp. _____

OBSERVED DATA

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

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						732	75			72
1.	3	1.000	43	35	82	668	76			3
2.	3	1.500	54	51	79	626	76			3
3.	3	1.500	83	70	77	570	77			3
4.	3	1.750	84	70	77	451	77			3
5.	3	1.750	61	37	73	555	76			20

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.	6.182	44.35	56.2	.9795	.9608		258.0
2.	14.36	58.54	67.2	.9822	"		793.2
3.	14.36	82.06	96.2	.9840	"		1114
4.	20.15	82.49	97.2	.9840	"		1571
5.	20.15	52.39	74.2	.9877	"		1002

PRESSURE CALCULATIONS

Gas Liquid Hydrocarbon Ratio Dry Gas cf/bbl.
Gravity of Liquid Hydrocarbons _____ deg.
P_c 9.936 (1-e^{-s}) 0.128 126
Specific Gravity Separator Gas .650
Specific Gravity Flowing Fluid _____
P_c 745.2 P_c² 555.3

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.	681.2	464.0	2.563	6.569	.8408	464.8	90.5	681.8	.9149
2.	639.2	408.6	7.881	62.11	7.950	416.5	138.8	645.4	.8661
3.	583.2	340.1	11.07	122.54	15.68	355.8	199.5	596.5	.8004
4.	464.2	215.5	15.61	243.67	31.19	246.7	308.6	496.7	.6665
5.	568.2	322.8	9.956	99.12	12.69	335.5	219.8	579.2	.7772

Absolute Potential: 2200 MCFPD; n .8125 .8479
COMPANY TEXACO Inc. 8277 464.8 76.5 151.8
ADDRESS P. O. Box 1270, Midland, Texas 7.826 416.4 138.8 645.3 .8659
AGENT and TITLE P. W. Moore, District Gas Foreman P. W. Moore
WITNESSED (3) 15.44 355.5 199.8 596.8 766.7
COMPANY (4) 30.70 216.2 309.1 496.2 66.7
(5) REMARKS 225.3 270.0 579.0 77.0
12.49

16-D 4-1-137

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 .

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