

NEW MEXICO OIL CONSERVATION COMMISSION

Form C-122

Revised 12-1-55

MULTI-POINT BACK PRESSURE TEST FOR GAS WELLS

Pool Tubbs Formation Tubbs County Lee

Initial 8 Annual _____ Special _____ Date of Test 9-2-58 to 9-5-58

Company Phillips Petroleum Co. Lease 5144 Well No. 3

Unit 7 Sec. 24 Twp. 23-S Rge. 37-E Purchaser _____

Casing 5-1/8" Wt. 15.5 I.D. _____ Set at 6020' Perf. 6020' To 6150'

Tubing 2" Wt. 4.7 I.D. 1.995" Set at 6160' Perf. open end To _____

Gas Pay: From 6020 To 6150 L 4160 xG .6 -GL 3696 Bar.Press. 13.2

Producing Thru: Casing _____ Tubing 8 Type Well single

Date of Completion: Nov 8-31-58 Packer none Single-Bradenhead-G. G. or G.O. Dual 108 Reservoir Temp. _____

OBSERVED DATA

Tested Through (Prover) HHHHHHHH Type Taps _____

No.	Flow Data					Tubing Data		Casing Data		Duration of Flow Hr.
	(Prover) (Line) Size	(Orifice) Size	Press. psig	Diff. h _w	Temp. °F.	Press. psig	Temp. °F.	Press. psig	Temp. °F.	
SI						2712	90			72
1.	4"	1-1/4"	8.24	-	78	1374	82	1410		2-1/2
2.	4"	1-1/2"	8.35	-	71	1162	71	1224		18
3.	4"	1-1/2"	11.30	-	61	788	61	833		6
4.	4"	1-1/2"	12.77	-	60	516	70	624		21
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.	603.4	-	22.04	.9831	1.000	1.000	994.2
2.	851.2	-	21.55	.9896	1.000	1.000	842.1
3.	1006.7	-	24.90	.999	1.000	1.000	1001.7
4.	1096	-	25.97	1.000	1.000	1.000	1096
5.							

PRESSURE CALCULATIONS

Gas Liquid Hydrocarbon Ratio 182,250 cf/bbl.

Gravity of Liquid Hydrocarbons 55.7 deg.

F_c no measured (1-e^{-s})

Specific Gravity Separator Gas .60

Specific Gravity Flowing Fluid _____

P_c 1725.2 P_c 2976

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.	1423.2					2025	951		.825
2.	1297.2					1631	1449		.728
3.	846.2					716	2260		.490
4.	637.2					406	2570		.349
5.									

Absolute Potential: 1200 MCFPD; n .61429

COMPANY Phillips Petroleum Co.

ADDRESS Box 2105, Hobbs, N. M.

AGENT and TITLE W. C. Rodgers, District Sales Independent

WITNESSED R. N. Hughes R. N. Hughes

COMPANY Phillips Petroleum Company

REMARKS

"Values taken from Table VII, N.M. O.C., "Manual for Gas-oil Ratio Determination", as flow pressures were below critical values.

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 any 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 casing, tubing if flowing thru tubing.) 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 determined because of manner of completion or condition of well, then P_w may be calculated by adding the pressure drop due to friction within the flow string to P_t .

SEP 10 AM 10 05

