

NEW MEXICO OIL CONSERVATION COMMISSION

Form C-122

Revised 12-1-55

MULTI-POINT BACK PRESSURE TEST FOR GAS WELLS

Pool Jalnat Formation Yates County Lea
Initial _____ Annual _____ Special X Date of Test 3/5-8/1958
Company Phillips Petroleum Company Lease C.D. Woolworth, Group 3 Well No. 3
Unit M Sec. 6 Twp. 25 Rge. 37 Purchaser El Paso Natural Gas Company
Casing 7" Wt. 24# I.D. _____ Set at 3040' Perf. 2850' To 3000'
Tubing 2" Wt. 4.7# I.D. _____ Set at 2974' Perf. _____ To _____
Gas Pay: From 2850 To 3000 L 2974 xG 0.655 -GL 1948 Bar.Press. 13.2
Producing Thru: Casing _____ Tubing X Type Well Single
Re- _____ Single-Bradenhead-G. G. or G.O. Dual
Date of Completion: Feb. 14, 1958 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						411		472		72
1.	4	1.250	216	4.84	64	270		393		24
2.	4	1.250	234	20.24	62	278		301		24
3.	4	1.250	226	23.04	64	236		268		24
4.	4	1.250	228	26.01	67	230		263		24
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.	9.643	33.31	229.2	0.9962	0.9571	1.022	313
2.	9.643	70.75	247.2	0.9981	0.9571	1.024	668
3.	9.643	74.24	239.2	0.9962	0.9571	1.023	698
4.	9.643	79.20	241.2	0.9933	0.9571	1.022	742
5.							

PRESSURE CALCULATIONS

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

Specific Gravity Separator Gas 0.655
Specific Gravity Flowing Fluid _____
P_c 485.2 P_c 235.4

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.	283.2	80.2				165.0	70.4	406	
2.	291.2	84.8				98.7	136.7	314	
3.	249.2	62.1				79.1	156.3	281	
4.	243.2	59.1				76.3	159.1	276	
5.									

Absolute Potential: 1050 MCFPD; n 1COMPANY Phillips Petroleum CompanyADDRESS Box 2105, Hobbs, New MexicoAGENT and TITLE W. W. Phillips - District EngineerWITNESSED Test conducted by El Paso Natural Gas Company (gatherer) (P. N. Randolph)

COMPANY _____

REMARKS

Repotential after removing packer and lowering tubing.

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/day. @ 15.025 psia and 600° 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)

P_{fh} = Flowing wellhead pressure (tubing or casing pressure) (whichever is greater) (if flowing thru casing) (if flowing thru tubing)

P_r = Meter pressure, psia.

h_w = Differential meter pressure, inches water.

F_g = Gravity correction factor.

F_t = Flowing temperature correction factor.

F_{sc} = 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 .

P-1000 - 1st Security Council
P-1000 - G-5 #1
M-6-28-37
Lan County, N.C.
3/8/68

