

NEW MEXICO OIL CONSERVATION COMMISSION

Form C-122

MULTI-POINT BACK PRESSURE TEST FOR GAS WELLS

Revised 12-1-55

Pool Permian Formation Permian County Permian
Initial 1000 Annual 1000 Special 1000 Date of Test 1-1-56
Company Permian Petroleum Corporation Lease 1000 Well No. 1000
Unit 1000 Sec. 1000 Twp. 1000 Rge. 1000 Purchaser Permian Petroleum Corporation
Casing 5 1/2" Wt. 10.0 I.D. 4.0 Set at 1000 Perf. 1000 To 1000
Tubing 3 1/2" Wt. 4.0 I.D. 1.0 Set at 1000 Perf. 1000 To 1000
Gas Pay: From 1000 To 1000 L 10 xG 0.07 -GL 1000 Bar.Press. 1000
Producing Thru: Casing 1000 Tubing 1000 Type Well Single-Bradenhead-G.G. or G.O. Dual
Date of Completion: 1-1-56 Packer 1000 Reservoir Temp. 1000

OBSERVED DATA

Tested Through (Prover) (Choke) (Meter)

Type Taps 1000

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.	
1.	4"	2.00"	462.9	5.7	67			91.7		71.25
2.	4"	2.00"	463.8	10.5	66			709.5		1.75
3.	4"	2.00"	463.9	15.0	67			40.7		2.0
4.	4"	2.00"	455.6	17.7	71			10.0		2.0
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.	9.72	51.04	475.1	0.901	0.903	1.047	1532
2.	10.72	70.77	474.3	0.9025		1.047	2060
3.	20.72	81.69	47.1	0.9023		1.047	4.91
4.	20.72	91.19	469.1	0.9028		1.047	2460
5.							

PRESSURE CALCULATIONS

Gas Liquid Hydrocarbon Ratio 1000 cf/bbl.
Gravity of Liquid Hydrocarbons 1000 deg.
F_c 9.736 (1-e^{-s}) 0.10

Specific Gravity Separator Gas 1000
Specific Gravity Flowing Fluid 1000
P_c 911.9 P_c 1000

$\mu_2 = 0.36$ $\mu_1 = 1.46$

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.	816.6	666.8	15.22	231.6	205.5	711.4	168.0	537	.90
2.	710.7	505.3	20.07	402.8	361.9	511.2	204.2	764	.82
3.	615.9	379.3	24.75	612.6	550.8	371.1	248.2	594	.73
4.	515.2	265.2	24.51	600.8	541.0	271.1	288.3	536	.64
5.									

Absolute Potential: 3600 MCFPD; n .52COMPANY Permian Petroleum CorporationADDRESS Permian Petroleum CorporationAGENT and TITLE W. J. C. C. C.

WITNESSED

COMPANY Permian Basin P.L.

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 .