

NEW MEXICO OIL CONSERVATION COMMISSION

Form C-122

MULTI-POINT BACK PRESSURE TEST FOR GAS WELLS

Revised 12-1-55

Pool Leak Narrows Formation Pennsylvanian County Lea
Initial I Annual _____ Special _____ Date of Test 6/25/63-6/29/63
Company Pan American Petroleum Corp. Lease Plains Unit Well No. 2
Unit I Sec. 24 Twp. 19-S Rge. 12-E Purchaser Southern Union Gas Company
Casing 7" Wt. 26.4 I.D. 6.276 Set at 12,765 Perf. 12,403 To 12,530
Tubing 2" Wt. 4.74 I.D. 1.995 Set at 12,512 Perf. (mlx.) To _____
Gas Pay: From 12,403 To 12,530 L 12,512 xG 0.77 -GL 96.14 Bar.Press. 13.2
Producing Thru: Casing _____ Tubing I Type Well G.O. Dual
Date of Completion: 5/31/63 Packer 11,700 Single-Bradenhead-G. G. or G.O. Dual
Reservoir Temp. _____

OBSERVED DATA

Tested Through (Pressure) (Gauge) (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										
1.	4.000	1.000	533	16	80°	2956				21
2.	4.000	1.500	533	25	84°	2858				24
3.	4.000	1.500	548	58.8	82°	2725				24
4.										
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.	6.135	93.5	546.2	0.9813	0.9606	1.033	569.5
2.	13.99	116.9	546.2	0.9777	0.9606	1.032	1616
3.	13.99	181.7	541.3	0.9795	0.9606	1.032	2517
4.							
5.							

PRESSURE CALCULATIONS

Gas Liquid Hydrocarbon Ratio 22520 cf/bbl.
Gravity of Liquid Hydrocarbons 55.6° API deg.
F_c 9.936 (1-e^{-s}) 0.485

Specific Gravity Separator Gas 0.65
Specific Gravity Flowing Fluid 0.77
P_c 3253.2 P_c² 10583.3

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.	2969.2	8816.1	5.659	32.024	15.532	8831.6	1751.7	2971.8	0.914
2.	2871.2	8243.8	16.057	257.827	125.046	8368.8	2214.5	2892.9	0.889
3.	2738.2	7497.7	25.009	625.450	303.343	7801.0	2782.3	2793.0	0.859
4.									
5.									

Absolute Potential: 9.5 MCFPDMCFPD; n 1.000COMPANY Pan American Petroleum CorporationADDRESS Box 68 - Hobbs, New MexicoAGENT and TITLE J. W. Mack - Area Engineer

WITNESSED _____

COMPANY _____

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} = 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 .