

NEW MEXICO OIL CONSERVATION COMMISSION

Form C-122

MULTI-POINT BACK PRESSURE TEST FOR GAS WELLS

Revised 12-1-55

Pool Wildcat Formation Marrow County Lee
Initial X Annual _____ Special _____ Date of Test 10/16/62
Company Pan American Petroleum Corp. Lease Plains Unit Well No. 1
Unit D Sec. 27 Twp. 19S Rge. 32E Purchaser None
Casing 5-1/2" Wt. 20# I.D. 4.892 Set at 13160 Perf. 13004 To 13010
Tubing 2-1/2" Wt. 6.5# I.D. 2.441 Set at 12906 Perf. --- To ---
Gas Pay: From 13004 To 13010 L 12906 xG 0.81 -GL 10519 Bar.Press. 13.2
Producing Thru: Casing _____ Tubing X Type Well Single
Date of Completion: _____ Packer 12951 Single-Bradenhead-G. G. or G.O. Dual
Reservoir Temp. _____

10/11/62

OBSERVED DATA

Tested Through (Pressure) (Stroke) (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	1.500	540	12	87	1165				7 2 1/2
2.	4.000	1.500	540	14.5	87	900				2-1/4
3.	4.000	1.500	540	16.5	94	745				2-3/4
4.	4.000	1.500	540	18.0	94	612				2-1/2
5.										2

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.	13.99	81.48	553.2	0.9750	0.9608	1.049	1120
2.	13.99	89.56	553.2	0.9750	0.9608	1.049	1224
3.	13.99	95.54	553.2	0.9608	0.9608	1.048	1304
4.	13.99	99.79	553.2	0.9608	0.9608	1.048	1361
5.							

PRESSURE CALCULATIONS

Gas Liquid Hydrocarbon Ratio 16065 cf/bbl.
Gravity of Liquid Hydrocarbons 0.52 deg.
P_c 5.066 (1-e^{-s}) 0.514
Specific Gravity Separator Gas 0.65
Specific Gravity Flowing Fluid 0.81
P_c 3451.2 P_c² 11910.8

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.	1178.3	1388.16	6.570	43.16	22.18	1410.34	10500.5	1187.6	34.43
2.	913.2	833.91	7.100	50.41	25.38	833.91	11076.6	987.8	28.88
3.	738.2	544.87	7.449	55.48	28.87	544.87	11005.9	777.8	28.34
4.	615.2	378.46	7.901	62.42	32.76	378.46	11037.2	690.9	28.86
5.									

Absolute Potential: 1420 MCFPD MCFPD; n 1.000
COMPANY Pan American Petroleum Corporation
ADDRESS Box 68 - Hobbs, New Mexico
AGENT and TITLE J. W. Meek - 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} = 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 .