

## NEW MEXICO OIL CONSERVATION COMMISSION

Form C-122

Revised 12-1-55

## MULTI-POINT BACK PRESSURE TEST FOR GAS WELLS

Pool Jalmit Formation Yates-Seven Rivers County Lea  
Initial X Annual \_\_\_\_\_ Special \_\_\_\_\_ Date of Test 5-19-1958  
Company Pan American Petroleum Corp. Lease P. J. Langlie "A" Well No. 2  
Unit 2 L Sec. 9 Twp. 25 Rge. 37 Purchaser None  
Casing 5-1/2" Wt. 17.0# I.D. \_\_\_\_\_ Set at 3163 Perf. \_\_\_\_\_ To \_\_\_\_\_  
Tubing 2" Wt. 4.7# I.D. \_\_\_\_\_ Set at 3110 Perf. \_\_\_\_\_ To \_\_\_\_\_  
Gas Pay: From 2823 To 3110 L 3110 xG .650 -GL 2022 Bar.Press. 13.2  
Producing Thru: Casing \_\_\_\_\_ Tubing X Type Well Single  
Date of Completion: 3-11-58 Packer None Single-Bradenhead-G. G. or G.O. Dual  
Reservoir Temp. \_\_\_\_\_

\* Test with 2" critical flow prover.

## 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 <sub>w</sub>	Temp. °F.	Press. psig	Temp. °F.	Press. psig	Temp. °F.	
SI						608		608		72 hrs.
1.	2" x 1/4"		596		72	596		599		3 hrs.
2.	2" x 1/2"		520		74	520		547		3 hrs.
3.	2" x 3/4"		390		69	390		543		3 hrs.
4.	2" x 7/8"		315		63	315		536		3 hrs.
* 5.	2" x 1/2"		508		75	508		562		24 hrs.

\* 24 Hr. Point

## FLOW CALCULATIONS

No.	Coefficient (24-Hour)	$\sqrt{h_w P_f}$	Pressure psia	Flow Temp. Factor F <sub>t</sub>	Gravity Factor F <sub>g</sub>	Compress. Factor F <sub>pv</sub>	Rate of Flow Q-MCFPD @ 15.025 psia
1.	1.4030		609.2	.9887	.9608	1.061	862
2.	5.5233		533.2	.9868	.9608	1.054	2,943
3.	12.2023		403.2	.9915	.9608	1.039	4,870
4.	16.7616		328.2	.9971	.9608	1.032	5,446
5.	5.5233		521.2	.9859	.9608	1.049	2,861

## PRESSURE CALCULATIONS

Gas Liquid Hydrocarbon Ratio Dry cf/bbl.  
Gravity of Liquid Hydrocarbons \_\_\_\_\_ deg.  
P<sub>c</sub> Measured (1-e<sup>-S</sup>) \_\_\_\_\_

Specific Gravity Separator Gas \_\_\_\_\_  
Specific Gravity Flowing Fluid \_\_\_\_\_  
P<sub>c</sub> 621.2 P<sub>c</sub> 385.9

No.	P <sub>w</sub> P <sub>t</sub> (psia)	P <sub>t</sub> <sup>2</sup>	F <sub>c</sub> Q	(F <sub>c</sub> Q) <sup>2</sup>	(F <sub>c</sub> Q) <sup>2</sup> (1-e <sup>-S</sup> )	P <sub>w</sub> <sup>2</sup>	P <sub>c</sub> <sup>2</sup> -F <sub>w</sub> <sup>2</sup>	Cal. P <sub>w</sub>	P <sub>w</sub> P <sub>c</sub>
1.	609.2	371.1				374.8	11.1		
2.	533.2	284.3				336.6	49.3		
3.	403.2	162.6	Measured			309.4	76.5		
4.	328.2	107.7				301.6	84.3		
5.	521.2	271.6				330.9	55.0		

Absolute Potential: 16,900 MCFPD; n 0.903COMPANY Pan American Petroleum CorporationADDRESS Box 68 - Hobbs, New MexicoAGENT and TITLE J. W. Mark Field EngineerWITNESSED Dyer & SouthernCOMPANY El Paso Natural Gas 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  $P_t$ .