NEW MEXICO OIL CONSERVATION COMMISSION

Form C-122

MULTI-POINT BACK PRESSURE TEST FOR GAS WELLS

Revised 12-1-55

Pool **Jalmat**   Formation **Yates**   County **Lea**

Initial _____ Annual _____ Special **X** _____ Date of Test **3-7/11-1960**

Company **Pan American Petroleum Corp.**   Lease **Farnsworth "A"**   Well No. **4**

Unit **E** Sec. **18** Twp. **26** Rge. **37** Purchaser **El Paso Natural Gas Company**

Casing **5-1/2** Wt. _____ I.D. _____ Set at **2884** Perf. **2755** To **2865**

Tubing **2** Wt. **4.7** I.D. _____ Set at **2716** Perf. **2686** To **2869**

Gas Pay: From **2755** To **2865** L **2686** xG **0.666** -GL **1769** Bar.Press. **13.2**

Producing Thru: Casing _____ Tubing **X** _____ Type Well **Single**

Date of Completion: **8-14-56** Packer **None**   Single-Bradenhead-G. G. or G.O. Dual   Reservoir Temp. _____

OBSERVED DATA

Tested Through ~~(Prover)~~ ~~(Choke)~~ (Meter)   Type Taps _____

No.	~~(Prover)~~ (Line) Size	~~(Choke)~~ (Orifice) Size	Press. psig	Diff. h_w	Temp. °F.	Press. psig	Temp. °F.	Press. psig	Temp. °F.	Duration of Flow Hr.
						Tubing Data		Casing Data		
SI										72
1.	4	2.500	18	0.50	*60	251				24
2.	4	2.500	20	3.12	-	246				24
3.	4	2.500	21	7.60	-	233				24
4.	4	2.500	24	24.50	-	215				24
5.						44				

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.	42.13	3.95	31.2	-	0.9491	-	157.9
2.	42.13	10.18	33.2	-	0.9491	-	407.1
3.	42.13	16.12	34.2	-	0.9491	-	644.5
4.	42.13	30.19	37.2	-	0.9491	-	1,207
5.							

PRESSURE CALCULATIONS

Gas Liquid Hydrocarbon Ratio _____ cf/bbl

Gravity of Liquid Hydrocarbons _____ deg.

P_c **9.936** $(1-e^{-s})$ **0.116**

Specific Gravity Separator Gas _____
Specific Gravity Flowing Fluid _____

P_c **264.2** P_c^2 **69.80**

No.	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	$\frac{P_w}{P_c}$
1.	251.2	67.15	1.549	2.462	0.2856	67.47	2.330	8.214	3.19
2.	246.2	60.61	4.043	16.35	1.898	62.51	7.290	7.907	2.993
3.	228.2	52.07	6.404	41.01	4.757	56.83	12.97	7.539	2.855
4.	57.2	3.272	11.99	143.8	16.68	19.95	49.85	4.467	1.691
5.									

Absolute Potential: **2575** MCFPD; n **0.619**

COMPANY **Pan American Petroleum Corporation**

ADDRESS **P. O. Box 66 - Hobbs, New Mexico**

AGENT and TITLE **Original Signed by** **Area Engineer**

WITNESSED **L. W. MEEK**

COMPANY **El Paso Natural Gas Company**

2598   .735
2500   946
238.0   10.3
141.2   .534

REMARKS

* **Temperature assumed.**

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.