NEW MEXICO OIL CONSERVATION COMMISSION

HOBBS OFFICE OCC

Form C-122
Revised 12-1-55

MULTI-POINT BACK PRESSURE TEST FOR GAS WELLS

1957 FEB 11 AM 10:07

Pool Eumont Formation Queen County Lea

Initial ____ Annual X Special ____ Date of Test Sept.10, 1956

Company John M. Kelly Lease Houston Well No. 1

Unit P Sec. 8 Twp. 19 Rge. 37 Purchaser El Paso Natural Gas

Casing 5 1/2 Wt. 15.5 I.D. ____ Set at 3883 Perf. 3706 To 3790

Tubing 2 Wt. 4.7 I.D. ____ Set at 3835 Perf. ____ To ____

Gas Pay: From 3706 To 3742 L 3835 xG .675 -GL 2587 Bar.Press. 13.2

Producing Thru: Casing ____ Tubing X Type Well Single
Single-Bradenhead-G. G. or G.O. Dual

Date of Completion: May 8, 1953 Packer 3680 Reservoir Temp. ____

OBSERVED DATA

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

No.	Flow Data ~~(Prover)~~ (Line) Size	~~(Choke)~~ (Orifice) Size	Press. psig	Diff. (h_w)	Temp. °F.	Tubing Data Press. psig	Tubing Data Temp. °F.	Casing Data Press. psig	Casing Data Temp. °F.	Duration of Flow Hr.
SI						956				72
1.	4	1.250	568	7.75	93	618				24
2.	4	1.250	559	6.6	94	667				24
3.	4	1.250	559	4.75	94	750				24
4.	4	1.250	559	3.0	100	806				24
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.	9.643	185.19	571.2	.9697	.9427	1.053	1720
2.	9.643	157.85	572.2	.9688	.9427	1.053	1464
3.	9.643	113.61	572.2	.9688	.9427	1.053	1058
4.	9.643	70.48	552.2	.9636	.9427	1.046	645
5.							

PRESSURE CALCULATIONS

Gas Liquid Hydrocarbon Ratio ____ cf/bbl. Specific Gravity Separator Gas ____

Gravity of Liquid Hydrocarbons ____ deg. Specific Gravity Flowing Fluid ____

P_c 9.936 $(1-e^{-s})$ 0.163 P_c 965.2 P_c^2 937.4

No.	~~P~~ P_t (psia)	P_t^2	F_cQ	$(F_cQ)^2$	$\frac{(F_cQ)^2}{(1-e^{-s})}$	P_w^2	$P_c^2-P_w^2$	Cal. P_w	$\frac{P_w}{P_c}$
1.	631.2	398.4	17.1	292.4	47.7	446.1	491.3	667.9	.69
2.	680.2	462.7	14.5	210.3	34.3	497.0	440.0	705.0	.73
3.	765.2	582.5	10.5	110.3	18.0	600.5	336.9	774.6	.80
4.	819.2	671.1	6.4	41.0	6.7	677.8	259.6	823.3	.85
5.									

Absolute Potential: 3,300 MCFPD; n 1.000

COMPANY John M. Kelly

ADDRESS Box 5671, Roswell, New Mexico

AGENT and TITLE Kenneth D. Mylan Production Superintendent

WITNESSED Smith & Blumer

COMPANY El Paso Natural

REMARKS

Second Test. Poor point on first test. Decreasing flow rate sequence used on this test for better point alignment; however, curve has slope in excess of 1.0 and slope of 1.0 was drawn through point of highest rate of flow.

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.