NEW MEXICO OIL CONSERVATION COMMISSION

HOBBS OFFICE OCC

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Form C-122

Revised 12-1-55

MULTI-POINT BACK PRESSURE TEST FOR GAS WELLS

1957 DEC 13 AM 8:47

DEC 6 PM 3:57

Pool Jalmat Formation Yates & 7 Rivers County Lea

Initial ____ Annual ____ Special X Date of Test 4-24 to 4-28-57

Company John M. Kelly Lease Hair Well No. 1

Unit L Sec. 8 Twp. 24 Rge. 37 Purchaser El Paso Natural Gas

Casing 7" Wt. 20# I.D. ____ Set at 2836 Perf. ____ To ____

Tubing 2 3/8" Wt. 4.7# I.D. ____ Set at 3528 Perf. ____ To ____

Gas Pay: From 2862 To 3054 L 2862 xG .650 -GL 1860 Bar.Press. 13.2

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

Date of Completion: 8-18-52 Packer 3145 Reservoir Temp. ____

OBSERVED DATA

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

No.	Flow Data: ~~(Prover)~~ x (Line) Size	~~(Choke)~~ x (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								902		72
1.	4	1.750	522	16.81	70			785		24
2.	4	1.750	526	28.09	70			773		24
3.	4	1.750	518	37.21	71			744		24
4.	4	1.750	535	54.76	68			702		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.	19.27	94.83	[illegible]	.9905	.9608	1.054	1833
2.	19.27	123.04	[illegible]	.9905	.9608	1.054	2378
3.	19.27	140.56	[illegible]	.9896	.9608	1.050	2814
4.	19.27	173.23	[illegible]	.9924	.9608	1.055	3354
5.							

PRESSURE CALCULATIONS

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

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

F_c .740 $(1-e^{-s})$ 0.120 P_c 915.2 P_c^2 837.6

No.	P_w 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.	798.2	637.1	1.356	1.839	.221	637.3	200.3	798.3	.87
2.	786.2	618.1	1.760	3.098	.372	618.5	219.1	786.4	.86
3.	757.2	573.4	2.082	4.335	.520	573.9	263.7	757.6	.83
4.	715.2	511.5	2.482	6.160	.739	512.2	325.4	715.7	.78
5.									

Absolute Potential: 7,600 MCFPD; n .869

COMPANY John M. Kelly

ADDRESS Box 5671, Roswell, New Mexico

AGENT and TITLE Kenneth Dimmitt Production Superintendent

WITNESSED E.H. Kerby

COMPANY El Paso Natural Gas

REMARKS

ILLEGIBLE

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.