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NEW MEXICO OIL CONSERVATION COMMISSION

MAY 16 1966

O. C. C.
ARTESIA, OFFICE

Form C-122
Revised 12-1-55

MULTI-POINT BACK PRESSURE TEST FOR GAS WELLS

Pool Wildcat Formation Pennsylvanian County Eddy

Initial X Annual ____ Special ____ Date of Test 1/4/58

Company Tennessee Gas Transmission Co. Lease State John M. Kelly "A" Well No. 1

Unit E Sec. 34 Twp. 24-S Rge. 27-E Purchaser None

Casing 7" Wt. 26 I.D. 6.276 Set at 10,824 Perf. None To ____

Tubing 2.375 Wt. 4.7 I.D. 1.995 Set at 10,795 Perf. None To ____

Gas Pay: From 10,871 To 10,881 L 10,871 xG 0.635 -GL 6903 Bar.Press. 13.2

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

Date of Completion: 12/31/57 Packer 10,785 Reservoir Temp. 160° F.

CO_2 0.22% N_2 0.40%

OBSERVED DATA

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

No.	Flow Data (Prover) (Line) Size	Flow Data (Choke) (Orifice) Size	Flow Data Press. psig	Flow Data Diff. h_w	Flow Data Temp. °F.	Tubing Data Press. psig	Tubing Data Temp. °F.	Casing Data Press. psig	Casing Data Temp. °F.	Duration of Flow Hr.
SI	2					6400				78
1.	2	8/64	4131			4131	60			4
2.	2	9/64	3623			3623	60			4
3.	2	11/64	2650			2650	60			4
4.	2	12/64	2240			2240	60			4
5.	2	17/64	1300			1300	60			28

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.	0.3961		4144.2	1.000	0.9721	1.089	1439.6
2.	0.4140		3636.2	1.000	0.9721	1.125	1686.1
3.	0.6024		2663.2	1.000	0.9721	1.178	1898.0
4.	0.7425		2253.2	1.000	0.9721	1.190	1935.7
5.	1.5049		1313.2	1.000	0.9721	1.140	2189.6

PRESSURE CALCULATIONS

Gas Liquid Hydrocarbon Ratio Dry cf/bbl.
Gravity of Liquid Hydrocarbons - - deg.
F_c 9.936 $(1-e^{-s})$ 0.377

Specific Gravity Separator Gas 0.635
Specific Gravity Flowing Fluid -
P_c 6413.2 P_c^2 41129

No.	P_w / P_t (psia)	P_t^2	$F_c Q$	$(F_c Q)^2$	$\frac{(F_c Q)^2}{(1-e^{-s})}$	P_w^2	$P_c^2 - P_w^2$	Cal. P_w	$\frac{P_w}{P_c}$
1.	4144.2	17174	14.214	202.038	76.168	17250	23879	4153.3	0.648
2.	3636.2	13222	16.356	267.519	100.855	13323	27806	3650.0	0.569
3.	2663.2	7093	18.859	355.662	134.085	7227	33902	2688.3	0.419
4.	2253.2	5077	19.233	369.908	139.455	5817	35312	2284.0	0.356
5.	1313.2	1725	21.756	473.324	178.443	1903	39226	1380.0	0.215

Absolute Potential: 2240 MCFPD; n 0.81187

COMPANY Tennessee Gas Transmission Company
ADDRESS Box 2511, Hobbs, New Mexico
AGENT and TITLE J. F. Carnes - District Engineer
WITNESSED ____
COMPANY ____

REMARKS

Well shut in. No pipe line connection available.

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.